



WHITE PAPER
JUNE 2025

Cashing in on circularity

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halve the costs of cup packaging



Cashing in on circularity: How Mastercard helped Blenheim Palace halve the costs of cup packaging



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Organizations are discovering that circular economy models, which aim to reduce waste and pollution by keeping resources in use as long as possible, can reduce costs and create new revenue streams. As a result, forward-thinking businesses are capitalizing on the shift from wasteful, linear systems to more profitable circular alternatives.

The transition from “take-make-dispose” models to circular systems represents one

of the most profound operational shifts of the 21st century—one that may offer competitive advantages to those who embrace it.

And when implemented thoughtfully, circular economy initiatives can create multiple layers of value that extend far beyond environmental benefits.





Circular innovation

Blenheim Palace, a UNESCO World Heritage site in Oxfordshire, England, demonstrates how businesses can implement circular economy initiatives while improving operational efficiency, enhancing visitor experiences and cutting costs.

Two years ago, Blenheim Palace faced a common costly problem; it was spending over £100,000 annually on single-use cups that added to the many single-use cups reaching landfill or incineration every day.

Today, the historical site has achieved a notable **50 percent** reduction in beverage packaging costs by implementing a deposit return scheme (DRS) with reusable cups (similar to those [in Denmark](#)).

The new program, which offers customers rapid, convenient reimbursements for returning their cups, has already had significant positive impact on the historical site. "The transition wasn't merely about sustainability metrics," says David Green, Head of Innovation at Blenheim Palace. "Our reusable cup scheme has significantly cut costs and fundamentally transformed our operations," reimbursing customers rapidly and conveniently for returning their cups.

The mechanics of circular success

Blenheim Palace's approach is elegant in its simplicity.

Visitors pay £2 deposits to rent RFID-enabled reusable cups, which they can later return to reverse vending machines. re-universe, Blenheim Palace's circularity solutions provider, assigns each cup a digital identity for data tracking and tracing throughout its usage.

Blenheim Palace collects, washes, and reintroduces the cups into circulation—and visitors get safe, secure, near-instantaneous refunds to their payment cards.

"With return machines streamlining the process," Green says, "we're achieving remarkable results that prove sustainable operations can be financially viable, too."

In a twelve-month period, Blenheim Palace has cut 1,150 kg of carbon emissions and kept 320,000 single-use cups out of landfills.



1,150kg

of carbon emissions cut in just a twelve-month period



The business case for circularity

"For circular initiatives to scale, the consumer experience must be seamless," says Pratik Khowala, Mastercard's Global Head of Transfer Solutions. "Our payments technology enables Blenheim Palace to offer near instant deposit returns without requiring visitors to download apps or share additional banking information—a critical factor in achieving high participation rates, especially among international visitors."

Beyond environmental benefits, the financial case for this circular system is compelling. Blenheim Palace reports a 50 percent cost savings during the second year of implementation, including reduced waste management expenses and operational efficiencies. The DRS program has proven to be cost effective given each £2 reusable cup requires only four uses for its cost to

break even, versus spending anywhere from £0.35 to £0.67 per single-use cup.

Unlike the previous model, the circular system provides valuable data insights that highlight opportunities for continued improvement.

"The metrics we now track go well beyond basic environmental indicators," Green says. "We're measuring operational efficiency, visitor satisfaction, and return rates by location. This data allows us to continually refine the system for maximum impact and is leading us to invest more in the program. We're starting with hot cups, but we are planning to expand into cold cups and other packaging soon."



The visitor experience

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Visitor feedback has been overwhelmingly positive, guests specifically mention the reusable cup program in visitor surveys, noting how it aligns with their own values around environmental stewardship.



David Green
Head of Innovation at Blenheim Palace

This alignment with consumer values represents an increasingly important competitive advantage for organizations across sectors.

Retailers, manufacturers, hospitality providers, and service organizations across numerous industries and product categories can adapt these circular economy principles to their specific contexts.

“The technology behind the Blenheim experience can be applied to numerous circular economy initiatives beyond cups—from deposit-based redemption for reusable packaging to product buyback and peer-to-peer resale,” says Khowala.

6 keys to successful implementation

Blenheim Palace's initiative reveals six critical factors organizations should consider when they implement their own circular economy programs:



Consumer education

Clear communication about process and benefits drives participation.



Staff training and engagement

Front-line employees must understand the system to support it and encourage consumers to participate.



Frictionless user experience

Simplicity in participation—making deposits and returns as easy as possible—is non-negotiable for high adoption.



Inclusivity

Systems must accommodate diverse user needs, including those of international visitors.



Optimized incentive structure

Deposit fees must balance motivation for returns without deterring participation.



Data-driven management

Real-time data visibility enables continuous improvement and optimization.



5 strategic implications for leaders

For executives considering circular economy initiatives, the Blenheim Palace case offers several clear takeaways:

1

Start with high-visibility waste streams: Focus initial circular economy efforts on visible, high-volume waste that resonates with stakeholders.

2

Design for user experience: Prioritize simplicity and convenience in circular systems to drive adoption.

3

Use technology appropriately: Digital tools should reduce friction, not add complexity.

4

Measure multidimensional value: Track environmental, financial, operational, and customer experience metrics.

5

Communicate authentically: Share transparent progress and insights with stakeholders.

Organizations that approach circular economy initiatives as strategic opportunities rather than compliance requirements stand to gain significant advantages in operational efficiency, cost reduction, brand perception, and environmental impact.

Circularity is not a new idea, but as organizations course-correct away from linear models, the circular economy is presenting new opportunities for businesses. As Blenheim Palace's experience demonstrates, organizations that embrace this transition thoughtfully can achieve positive results across the triple bottom line of people, planet and profit.

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The most surprising aspect of our journey has been discovering that circular systems often outperform linear ones on pure business metrics. Sustainability is no longer a trade-off against profitability—increasingly, it's becoming a driver of it.

David Green
Head of Innovation at Blenheim Palace



Circular economy solutions aren't just good for the planet – they're good for business. See how [Mastercard Move](#) can help you make the switch.





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