

INDEED

Circularity Index

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This white paper examines how German companies are adopting the Circular Economy, a main pillar of the EU Green Deal. It establishes a 'Circularity Index' for the DAX 40 firms, the major German and European companies listed on the Frankfurt Stock Exchange, uncovering their circularity goals and sustainability impact.

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AI Generated Image

Introduction

The EU should be climate-neutral by 2050.

The European Parliament views a well-functioning “Circular Economy” as a prerequisite for achieving the EU's goal of climate neutrality. This is why they made it the main component of the European Green Deal.

The benefits of a circular economy are clear: a healthier environment, less reliance on raw materials, and the creation of hundreds of thousands of new jobs. But how exactly does it function?

Traditionally, companies passed on responsibility for products after sale, leading to landfills and incineration. On the contrary, the circular economy concept focuses on keeping products in use, turning them back into valuable resources.

The principles of a circular economy aim to extend the utilisation phase of products for as long as possible. This is achieved through sharing, leasing, reusing, repairing, refurbishing, and recycling materials and products. Once processed, these materials can be reintroduced into the cycle, minimizing waste. Steel is a great example – over two-thirds of all steel ever produced is still in circulation today, taking on new forms. This continuous reuse saves

enormous amounts of energy, reduces environmental burden, lowers sourcing risks, and cuts costs.

To assess how far companies have progressed on the journey towards a circular economy, we examined the practices of Germany's 40 largest corporations. **The Circularity Index** evaluates these companies' publicly stated commitments to circularity.

Our goal is to understand how effectively they preserve value throughout the product lifecycle, minimizing waste. In essence, we're investigating: Have they set themselves concrete objectives? To what extent have they already achieved the goals they set themselves? Do companies take responsibility for their products beyond the point of sale?

The results are enlightening - and hold many a surprise. Enjoy!



Michael Leidl

Executive Director and AI Strategist

Findings

The largest German companies display varied positions on the EU's circular economy goal. Our analysis highlights the diverse strategies among German companies, revealing a spectrum of leaders and laggards in the transition to a circular economy.

Majority Adhering to Tradition

A notable 79% of companies continue to follow the traditional linear model.

This majority includes two groups: those working ambitiously to reduce their CO2 footprint and at least meet the 2°C target and those who have started these measures late and/or only do the minimum required by law. There may be exceptions due to particularly high baseline levels of greenhouse gas emissions. However, the effect was long known to all companies, and there was plenty of time for preparation.

Some companies stand out for their early, ambitious efforts. These frontrunners, positioned in the top quadrants of our matrix, are transitioning towards a circular economy by embracing all R-strategies, not just those enhancing production efficiency. Their actions significantly impact climate goals.

Commitments and Transparency

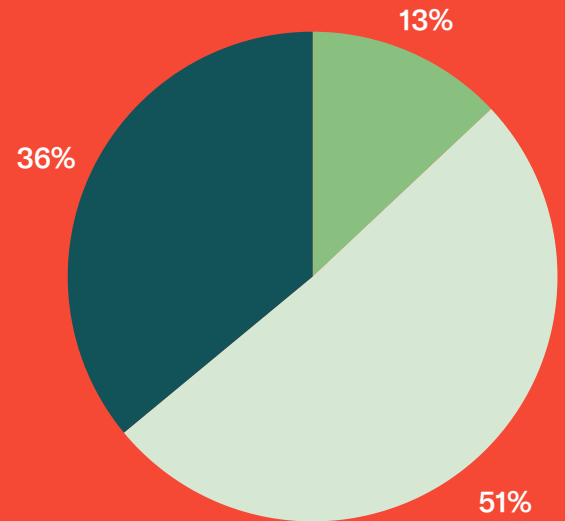
Over half (51%) of DAX 40 companies are committed to the circular economy, with only 13% setting specific target dates. However, 36% have made no commitment yet and transparency is also lacking, with only 7 out of 15 committed companies openly reporting progress. Notably, Deutsche Telekom stands out for detailing achievements relative to their total product volume.

Ambition vs. Tradition

A quarter (10 companies) aim for significant business model transformation. The remaining 29 companies follow the linear model, and five lack circular economy goals or activities.

Net Zero Aspirations

Nearly half (6 out of 15) aim for net zero status by 2030 or 2035, demonstrating a proactive approach within this group.

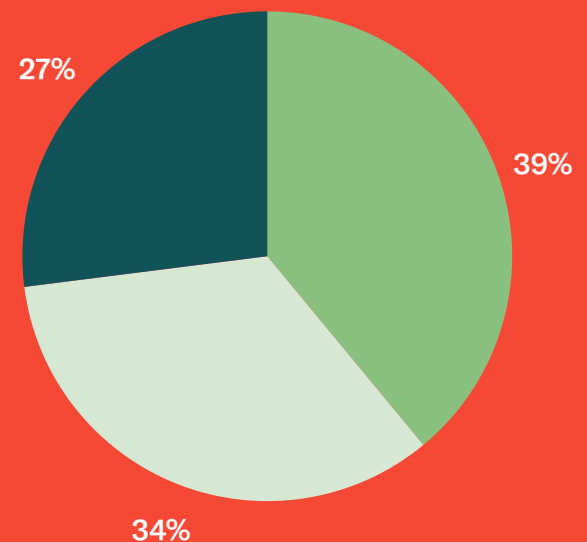


CIRCULAR ECONOMY TARGET

51%: Committed in Principle

36%: No Commitment

13%: Set a Concrete Objective

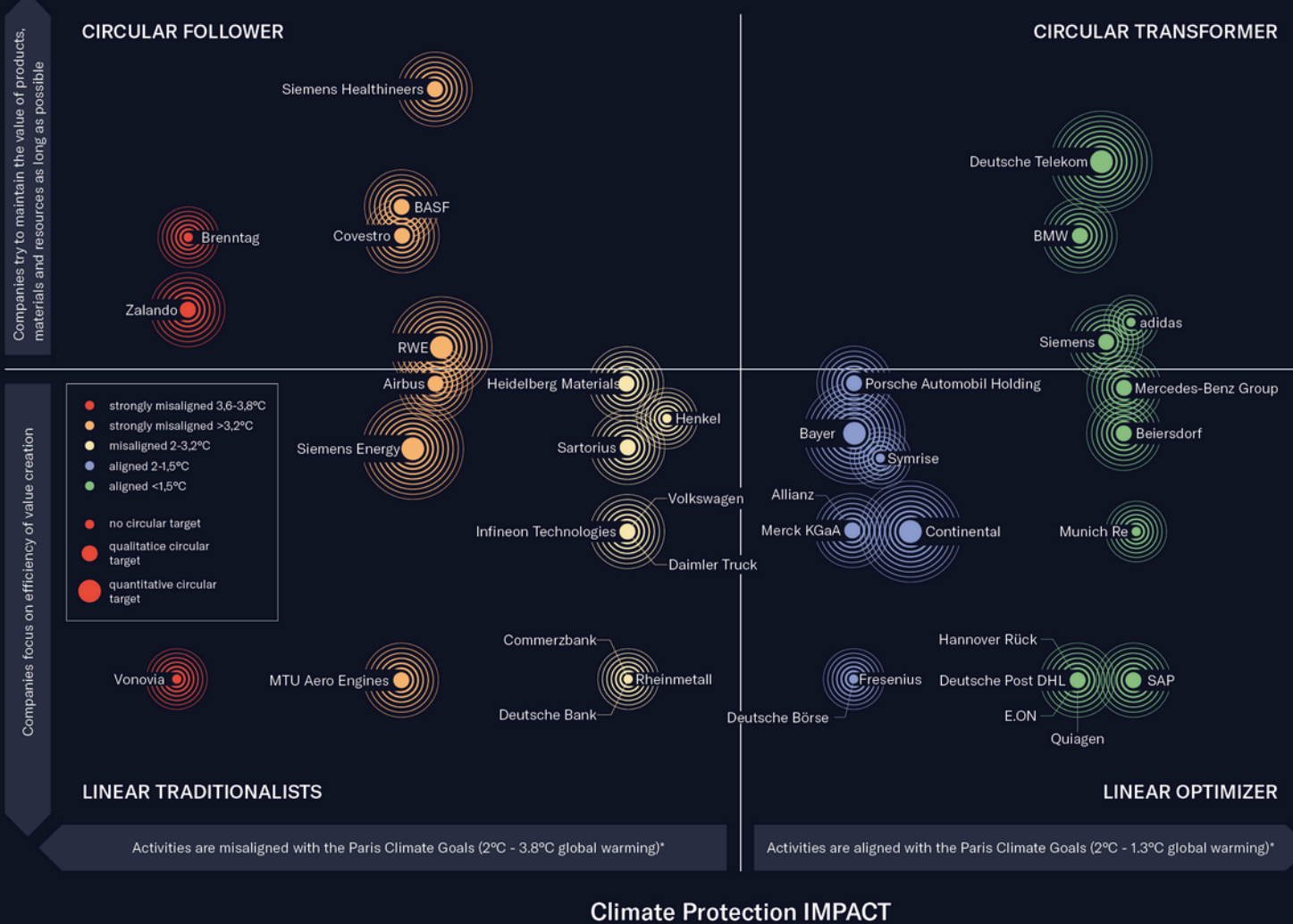


CIRCULAR ECONOMY INTERIM TARGETS

39%: Published Specific Interim Targets (with percentages and target dates)

34%: No Interim Targets Formulated

27%: Set Qualitative Targets



*Based on MSCI's measure „implied temperature rise“

The Index

Our study examines the circular economy ambitions of DAX 40 companies based on their publicly available sustainability reports. We focused on identifying companies with clearly defined circular economy objectives, as these hold more weight than vague mentions of activities. Ideally, these objectives are accompanied by documented progress reports.

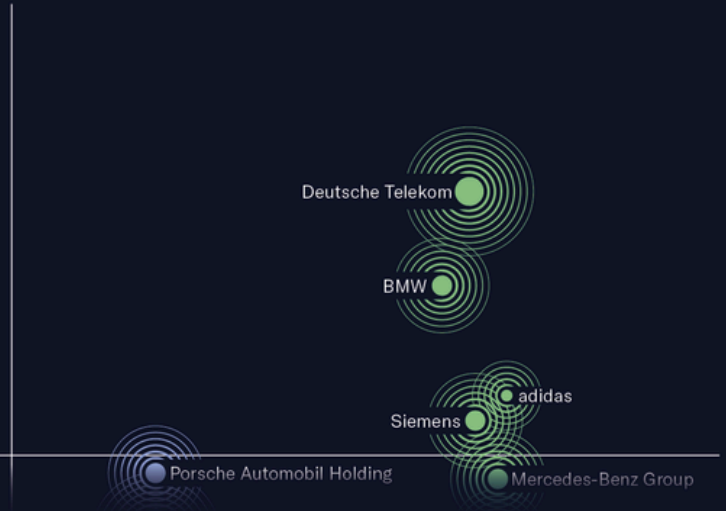
By combining this analysis with a metric for each company's contribution to limiting global warming, we identified the following four distinct typologies:

- **Circular Transformers:** These companies are leading the way by simultaneously achieving ambitious climate goals and driving the circular economy.
- **Circular Followers:** These companies are on the right track, actively pursuing circularity but still developing their climate strategies.
- **Linear Traditionalists:** These companies are successful with the traditional model, but haven't yet embraced circularity and are still developing their climate strategies.
- **Linear Optimizers:** These companies excel at optimizing their current model for climate goals, but haven't transitioned to circularity yet.

Circular Transformer

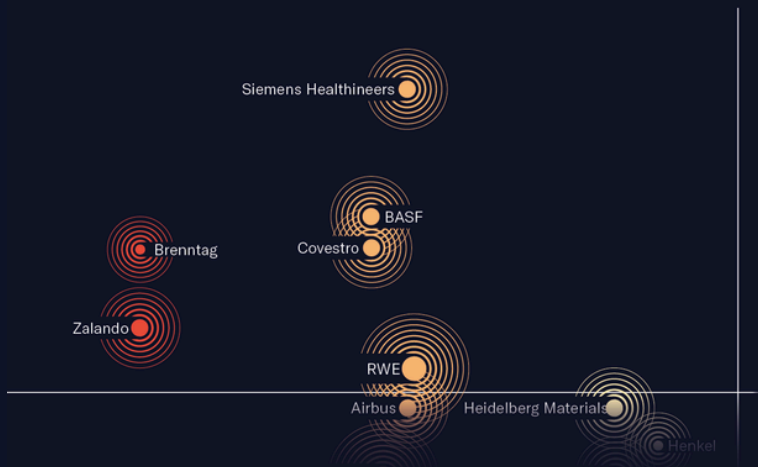
These are companies that concentrate on preserving value throughout the entire lifecycle of a product. They implement various strategies like take-back programs for refurbishing and repairing products or spare parts. Additionally, they explore innovative models such as product sharing and collaborate with other companies to create closed-loop systems for materials and energy flows.

These leaders are already making a significant contribution to achieving the Paris Agreement's target of limiting global warming to a maximum 2°C rise. The MSCI Implied Temperature Rise metric measures their impact, and their documented progress towards self-set goals determines their position on the x-axis rating scale (ranging from 3.8°C, furthest from the target, to 1.3°C, closest to the target).



Circular Follower

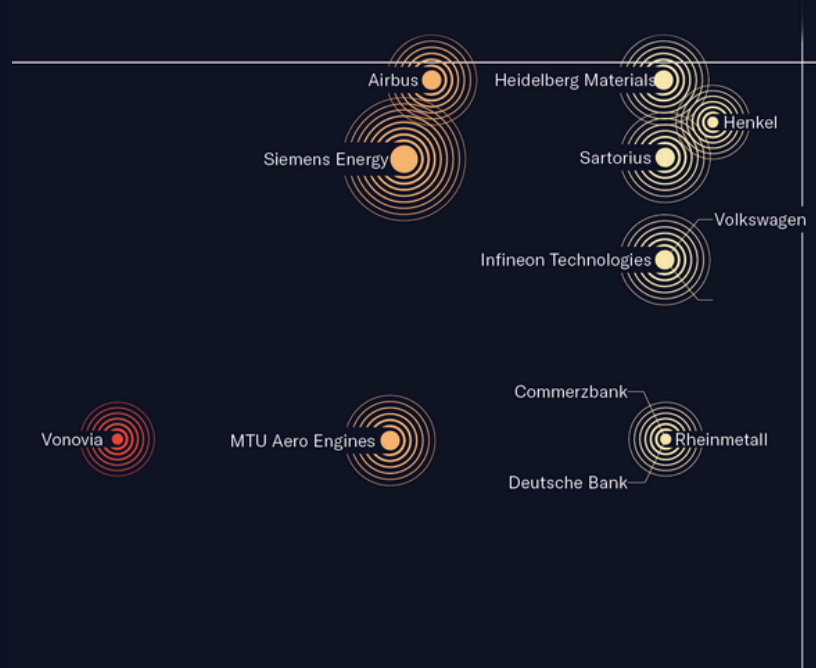
The companies in this category share similar ambitions for a circular economy as the Circular Transformers. However, their actions haven't reached the scale needed to significantly limit global warming. This can be attributed to factors like legacy infrastructure – for example, RWE's continued use of fossil fuel power plants creates a lasting environmental impact. Companies in the higher tiers, however, demonstrate a stronger commitment to transforming their business models and capitalizing on the opportunities presented by a circular economy.



Linear Traditionalists

These companies prioritize established business models focused on cost control and legal compliance. While they're actively reducing greenhouse gas (GHG) emissions, their efforts haven't yet reached the level needed to significantly contribute to the 2°C goal. Their approach often externalizes environmental impacts beyond the company's direct operations. Additionally, their circular ambitions are limited to internal efficiency gains, like energy conservation, cost-driven waste recycling, and resource optimization. They may also incorporate recycled materials when cost-effective. Regulations, such as the upcoming 2030 mandate for recyclable packaging, will be implemented gradually.

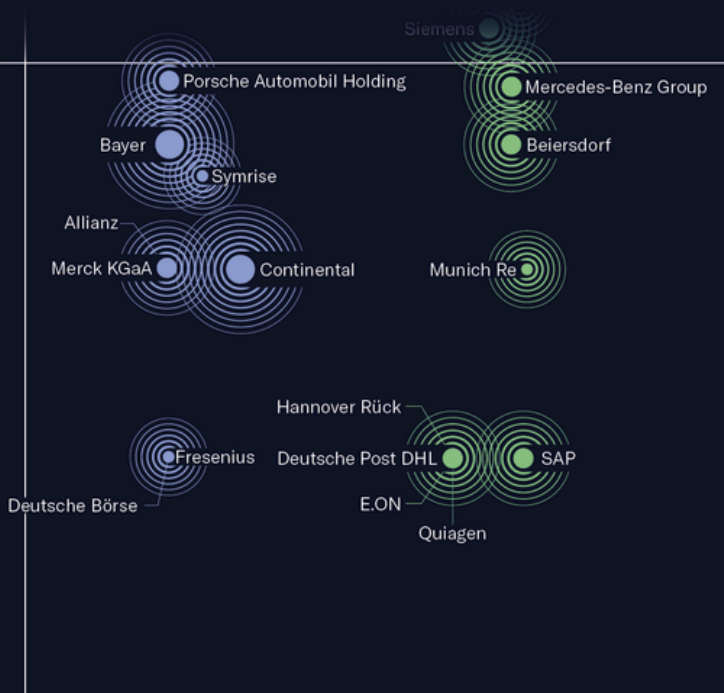
Higher-ranked companies in this category demonstrate a greater shift towards circularity. The companies at the very bottom have no published targets.



Linear Optimizer

This category stands out for achieving greenhouse gas (GHG) reductions that contribute significantly to the 2°C global warming target. What is striking here are the differences within the group:

- Top tier: begin to incorporate recyclable packaging and products into their strategies
- Mid tier: focus on efficiency measures like energy and material conservation
- Bottom tier: lack any stated circular economy goals



Company Profiles

The following pages present selected examples of companies representing the four typologies that emerge from this analysis. These profiles provide a snapshot of five companies' circular economy efforts, highlighting both their achievements and areas for improvement.

By showcasing these examples, we aim to illustrate the different stages and strategies companies adopt in their journey towards circularity, offering insights for other organizations aspiring to transition to a more sustainable and circular business model.



Circular Transformer

Company: Deutsche Telekom

Industry: Telecommunications

Global Reach: Operations in 50+ countries

Key Metrics:

- Mobile Customers: 242 million
- Fixed-Line Connections: 27 million
- Broadband Connections: 22 million
- MSCI Implied Temperature Rise: 1.3°C

Circularity Goals:

- Target Year: 2030
- Objective: Complete circularity of devices in Europe

Interim Targets:

- 100% sustainable treatment of CPE (modems, routers, tv-receiver etc.) devices by 2030
- Increase collection and recycling of used mobile devices
- Implement holistic TCO approach for network and IT infrastructure

Current Achievements:

- Sustainable packaging for all brand products in Europe (mid-2022)
- Collection and refurbishment of over 4 million CPE items (2023)
- Collection and refurbishment of over 8 million mobile phones (2023)

Key R-Strategies:

- Reuse: Refurbishment of routers and mobile phones
- Repair: In-store repair services
- Refurbishment: Extended use of CPE devices and mobile phones
- Recycling: Comprehensive recycling processes, including copper cables
- Resource Efficiency: Enhanced IT infrastructure and use of electric vehicles
- Holistic Approach: Green products and waste prevention

Evaluation

Deutsche Telekom is taking extensive measures to achieve its goal of being circular by 2030. This goal is very ambitious compared to other DAX 40 companies.

The advantage Deutsche Telekom has: leasing and the return of telephony equipment have always been part of its business model.

The company also early on developed a market for used devices and the recycling infrastructure.



Circular Follower

Company: Siemens Healthineers

Industry: Medical Technology

Global Reach: Leading global medical technology provider

Key Metrics:

- Total Revenue (FY 2023): €21.7 billion
- Value of Refurbished Systems: €92 million (0.4% of total revenue)
- MSCI Implied Temperature Rise: >3.2°C

Circularity Goals:

- Target Year: 2030
- Objective: Increase circular revenues and reduce GHG emissions across the value chain

Interim Targets:

- Develop circular economy technologies (e.g., RecyclableBlade, GreenerTower)
- Collaborate with top 1000 suppliers to reduce emissions through circular materials and methods
- Launch "Circuline" portfolio offering refurbished systems in FY 2023

Current Achievements:

- 480,000 used parts returned in FY 2023, with 50% repaired/reused
- 6,100 refurbished systems installed (Ecoline portfolio)

R-Strategies Applied:

- Recycle: Supporting recycling of materials
- Recovery: Resource recovery through recycling
- Refurbish: Extending lifespan of medical devices through refurbishment
- Upgrade: Maintenance and upgrades of products
- Share: Using identical components across product families
- Provide Ecosystem: Promoting reuse and exchange of products/materials
- Sustainable Design: Designing modular products for strategic component use

Evaluation

Siemens Healthineers has initiated ambitious measures such as product redesign and active product take-back and refurbishment to promote the circular economy. However, the company has not publicly committed to specific goals. The proportion of circular activities in the overall business remains too small to have a noticeable effect on achieving climate targets. This is highlighted by the financial share of installed refurbished devices being only 0.4% of total revenue.



Linear Traditionalists

Company: Vonovia

Industry: Residential Real Estate

Global Reach: Largest residential real estate company in Germany and Europe

Key Metrics:

- As of the end of 2023, Vonovia managed 545,919 of its own residential units, alongside 164,330 garages and parking spaces, and 8,691 commercial units
- MSCI Implied Temperature Rise: 3.8°C

Circularity Goals:

- Target Year: N/A
- Objective: No specific circular economy goals

Interim Targets:

- Sustainable construction with environmentally friendly practices
- Promote energy efficiency and reduce CO2 emissions

Current Achievements:

- General sustainable construction practices for new houses
- Focus on energy efficiency and CO2 reduction in existing properties

R-Strategies Applied:

Due to limited information, the classification of the applied R-strategies by Vonovia can only be vaguely described:

- Sustainable Construction: Focus on sustainable building practices
- Energy Efficiency: Measures to improve energy efficiency in properties

Evaluation

Vonovia follows general sustainability approaches, at least in line with regulatory requirements. However, no specific goals or measures have been published to promote the circular economy, which already exists and is being intensively discussed and tested in the construction industry. The implied temperature rise of 3.8°C underscores its classification as **Linear Traditionalists**.



Linear Optimizer

Name: Mercedes-Benz Group

Sector: Automotive manufacturing

Specialization: Luxury automobiles and commercial vehicles

Key Metrics:

- As of the end of 2023, Mercedes-Benz Group produced and sold 2 million new vehicles annually
- MSCI Implied Temperature Rise: 1.5°C

Circularity Goals:

Target Year: n/a

Increase the use of secondary materials in vehicles and incorporate the circular economy along the value chain. Primary objective: waste prevention.

Interim Targets:

- Set reduction targets for total waste volume and waste volume per vehicle.
- Reuse vehicle batteries or convert them into stationary energy storage before recycling.
- Use CO₂-reduced steel made entirely from scrap in production.
- Increase the proportion of secondary raw materials in the vehicle fleet to an average of 40% by 2030.

Current Achievements:

- Total waste volume per vehicle reduced by 9%.
- Waste volume for disposal per vehicle reduced by 42%.
- Energy consumption per vehicle reduced by 12% (Cars) and 8% (Vans).
- Water consumption per vehicle reduced by 8% (Cars) and 6% (Vans).
- Annual use of over 50,000 tons of CO₂-reduced steel with at least 70% scrap content.

R-Strategies Applied:

- Reuse: Mercedes-Benz Used Parts Center (MB GTC) dismantles over 5,000 vehicles annually for component reuse (2 million new vehicles sold annually).
- Recycle: All passenger cars and light commercial vehicles are at least 85% recyclable. Battery housings, cables, and busbars are recyclable.
- Reduce: Reduction in raw material use and increase in secondary raw materials in production.
- Energy/Water Efficiency: Significant reduction in energy consumption per vehicle.

Evaluation

The Mercedes-Benz Group has started implementing measures to promote the circular economy and achieve climate goals, with a focus on optimizing processes such as energy consumption, waste reduction, and CO₂ emission reduction in value creation. These activities are comprehensive enough to support the global goal of a maximum of 1.5°C global warming. However, the company has not publicly set concrete goals for taking responsibility for products beyond the usage phase, such as active return and remanufacturing processes. But it is close to the edge of becoming a circular transformer.

Methodology

Only the companies' sustainability reports from 2023 (or from 2022 if the 2023 reports were not available) were analyzed based on the objectives formulated there for the circular economy and documented progress towards these objectives.

The more precisely and transparently these objectives were formulated (including concrete percentage values, quantities, and progress achieved), the higher the rating. The objectives were also rated according to the level of value retention.

Resource efficiency alone receives a low rating, while taking back products and developing and rolling out completely new circular business models receive a high rating. The impact of an objective is also factored into the rating—pilot projects score low as a bonus, while deployment across the company scores correspondingly high.

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Limitations

The quality and transparency of sustainability reports vary greatly. Activities are often listed anecdotally with concrete successes but without any classification of how these are to be evaluated in relation to specific objectives.

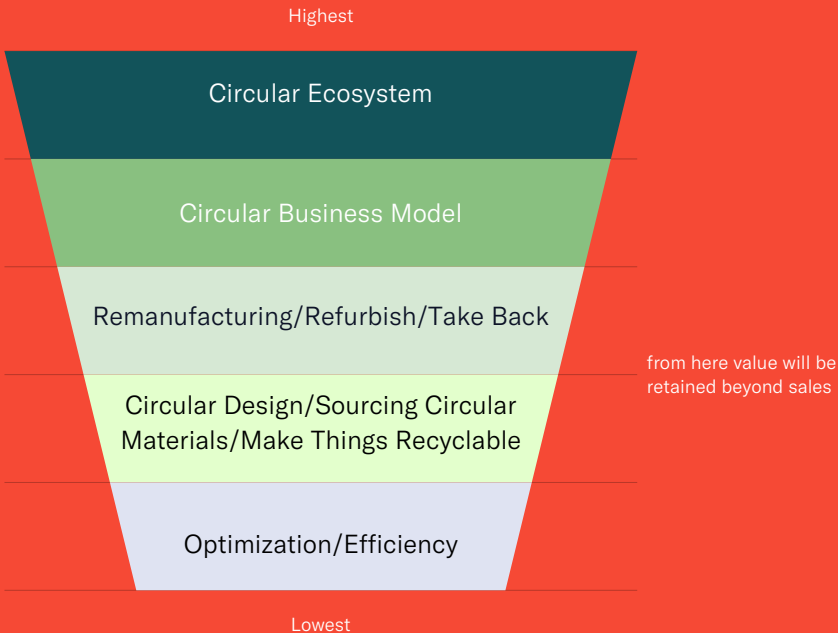
It can, therefore, happen that high ambitions and possibly also successes exist internally, but as they are not made public, they are not included in our assessment.

As we are looking at an initial snapshot, successes over time are not yet visible. Of course, it is more difficult for a company like Airbus to be circular than Munich Re. However, both companies need to adjust their business practices and develop new products if they want to support the EU goal of establishing a circular economy.

Conclusion

Concrete measures to track progress on the road to circularity and toward global warming targets will help to reveal the business impact of this transition. A goal, we are heavily working on.

Criteria for Ranking Companies





What's Next

The Circular Imperative

The future demands a Circular Economy.

This report has provided you with a snapshot of German companies' ambitions and efforts toward the Circular Economy displayed in their corporate sustainability goals and net-zero targets.

Now it's time for action. Sustainability is a business imperative, and Circularity is the lever that propels us forward. The transition hinges on a powerful synergy: effective regulations, evolving consumer preferences, and groundbreaking technology.

We, as businesses, organizations, and individuals, have a responsibility to make this transformative outlook a reality.

Systematic approach to Circular Transformation

Businesses must adopt a systematic approach, leveraging circular strategies and fostering a culture of innovation. Imagine a "macro" view that considers complex value chains and material science, coupled with a "micro" focus on product design through multi-stakeholder collaboration. Additionally, it is essential to set up learning programs that embed circular thinking in your organization and empower your teams to champion the change. Here's a three-pillar approach to implementing circular strategies and delivering circular innovation:

1/ Mapping the Circular Journey

Vision, Strategy & Roadmap: Outline the course. Define a clear vision, craft a comprehensive strategy, and develop a detailed roadmap to capture new value-creation possibilities across industries. This includes identifying high-impact opportunities for circularity, exploring innovative business models that capture and retain value within product lifecycles, leveraging digital tools for material flow analysis and product traceability, and fostering cross-industry partnerships and consortium programs.

2/ Designing the Circularity

Design, Deliver & Close the Loop: Start with design principles that prioritize functionality, resource efficiency, and manufacturability. Develop clever solutions for product-as-a-service models, remanufacturing, and product life extension. Explore reusable, returnable, and recyclable packaging solutions and leverage digital technologies for reverse logistics and user experience optimization. Finally, envision future-forward scenarios and thought-provoking concepts to inspire circular innovation.

3/ Championing Transformation

This pillar focuses on embracing organizational change and guiding your organization through a successful **circular transformation**. Develop compelling business value propositions that demonstrate both the financial and environmental benefits of circularity for your organization. Measuring progress is key: conduct maturity assessments to understand your current state of circularity, set ambitious but achievable targets, and establish key performance indicators (KPIs) to track progress. Equally essential is facilitating multi-stakeholder engagement and industry partnerships to ensure alignment across your value chain and build a collaborative ecosystem for circular innovation.

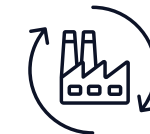
If needed, work with third-party expertise that provides direction and support in implementing effective change management strategies to empower your employees throughout the journey.

Embracing circularity goes beyond positioning it as a strategic business advantage;

It also builds resilience, future-proofs operations, and boosts brand reputation. Businesses that champion circularity not only contribute to a healthier planet but also unlock new revenue streams, build brand loyalty, and future-proof their operations.

In sum, circularity unlocks a competitive edge while collectively realizing the vision of a thriving circular future. As the Ellen MacArthur Foundation defines it, the Circular Economy is, by design, "a systemic approach to economic development that benefits businesses, society, and the environment." By joining forces, we can elevate individual efforts to an industry-wide transformation and create thriving ecosystems where innovation scales.

Let's begin this transformative journey together.



Eunji Park

Executive Director

Authors



Michael Leidl

Executive Director
m.leidl@indeed-innovation.com



Eunji Park

Executive Director



Nisarg Acharya

Senior Expert



Jeongwoo Jang

Senior Expert

Contributors

Natalie Jirmann

Paul Fally

Larissa Scherrer de Quadros

We'd love to hear from you
Let's chat! →

WHO WE ARE

We are the global design & innovation firm for a Circular Economy.

We partner with forward-acting organizations to **design and deliver products, experiences and systems** that eliminate waste, regenerate natural resources, keep materials and products in loops, and help humans to adopt circular business models.

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