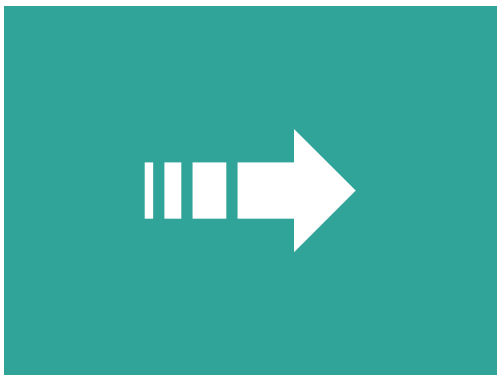
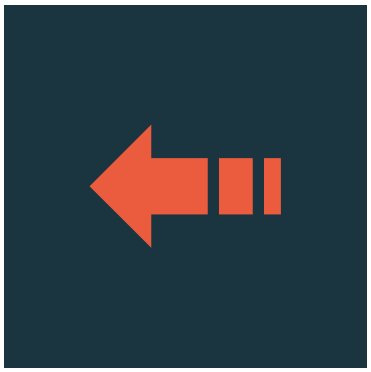
Method Paper

CE first

Methodological Foundation of a Radical Circular Economy

Luise Angermann
Carls Zukunft GmbH







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The Paradox of Procrastination:
Recognized Relevance Meets Action Paralysis

Recent discussions with companies within the framework of our PIQUALI project paint a clear yet paradoxical picture of corporate reality: The concept of the Circular Economy (CE) is well known in the executive suites of small and medium-sized enterprises (SMEs). Companies recognize the strategic relevance of circular approaches and associate them with concrete economic opportunities—particularly in the areas of innovation, opening up new markets, ESG and sustainability goals, risk minimization, cost reduction, and meeting customer expectations. However, behind this insight lies a fragile willingness to act: From ongoing exchanges with various companies, we perceive that around half of them currently feel unable to implement concrete circular measures or expand existing approaches within the next 12 months. Driven by pressing daily issues, limited budgets, uncertain return-on-investment expectations, unclear regulations, and questions of technical feasibility and materials, the topic is consistently postponed.

A typical pattern emerges: Day-to-day business and coping with acute crises take precedence; the transformation toward a circular economy is perceived as a luxury task for later times. Furthermore, there is a significant knowledge gap regarding systemic circular principles. The topic is often mistakenly misunderstood as a purely environmental or waste issue rather than being recognized for what it fundamentally is: a lever for increased competitiveness, risk reduction, and operational savings.

This procrastination is the direct result of an outdated logic of transformation. The traditional approach attempts to make the existing, linearly structured company step-by-step a few percent more sustainable. It tries to measure the status quo, write reports, and retrospectively graft circular add-ons onto an inherently linear business model.

However, this incremental path generates high bureaucratic hurdles with manageable benefits. As long as the circular economy is understood as an additional cost and effort factor, the willingness to act remains paralyzed. This also leads to continuing education and qualification offers in this area not being considered strictly necessary and sensible for executives and the workforce alike. Anyone who waits until all framework conditions are clarified and budgets are free, however, remains in the stance of an observer and misses the strategic exit from linear dependency.

The Perspective Shift: What if CE were real already?

To break through this blockade, a radical change in attitude and methodology is required—the Switch. Instead of asking, "How can we become a tiny bit more circular today under the given constraints?", the CE first approach reverses the logic and poses the provocative question:

> **What if CE were real already?**
> What if the circular economy were already a reality and the natural starting point of all entrepreneurial action?

In this analysis, we do not treat the Circular Economy as a distant goal or burdensome duty, but as the primary design principle from the very beginning. Starting from this conceptual premise, we redesign companies from a functional target state.

Competition Begins in the Ecosystem

In the Circular Economy, the "first" concept is far more tangible and urgent than in purely digital fields because supply chains create two-way dependencies. The danger is not that a company replaces a few plastic packaging options too late or fails to submit a sustainability report on time. The greater, ultimately existential risk is that other market participants—such as suppliers, buyers, logisticians, and competitors—build and occupy the ecosystem of circularity before one's own company is compatible. The actual strategic challenge for companies is not to miss getting connected in time.

When actors in the market begin to set up circular systems—for example, by establishing reliable return logistics, securing long-term access to high-quality secondary raw materials, and anchoring new Product-as-a-Service offerings—they change the entire market environment. Companies that persist in purely linear structures run the risk of losing direct access to these closed resource and customer loops. As the partner network gradually becomes circular, the remaining linear link in the chain comes under increasing pressure: rising primary raw material prices and stricter regulatory requirements burden economic efficiency, while circular actors benefit from more stable material flows and tighter customer loyalty. Anyone who relies exclusively on primary resources in the long term while the market closes loops consequently falls into a noticeable competitive disadvantage.

Therefore, CE first is not a question of ecology or certificates. It is a question of responsibility and leadership. Whoever leads a company bears responsibility for jobs, for customers, for markets—and for the future viability of their own operation. In a world where linear resources are reaching their limits and markets are reorganizing, it is no longer enough to rely on the stability of yesterday. It requires speed, attitude, and the willingness to radically redesign one's own business model before the market environment forces it. That is why the Circular Economy is primarily an entrepreneurial topic.

Thus, the transformation toward circularity evolves from a pure sustainability initiative into a central lever of long-term value creation. Companies that anchor the mechanisms of the circular economy early on not only secure market access but also build a sustainable competitive advantage. From these considerations, we derive the following thesis:

> Circular Economy is the key to greater entrepreneurial success. Companies that apply and implement the principles of the circular economy are economically more successful than those that do not.

What Concrete Added Value Does CE first Create?

Looking at one's own actions through the "CE first" glasses is not an academic experiment for small and medium-sized enterprises. Rather, it opens up concrete perspectives on how one's own business can be positioned to be stronger, more resilient, and more profitable under circular conditions. The consistent application of this mindset unfolds a multi-dimensional benefit that goes far beyond ecological effects and directly strengthens entrepreneurial competitiveness:

- **Strategic Resilience & Independence:**
  By thinking in closed material loops, companies reduce their vulnerability to volatile primary raw material prices, geopolitical supply chain disruptions, and material bottlenecks. Procurement risks largely dissolve, and cost-intensive disposal fees are eliminated.

- **Business Cost Advantages & Margins:**
  While linear throughput models continuously consume new resources, marginal costs for materials in their second and third life cycles drop significantly in a circular operation. Raw materials become permanently utilized assets, which sustainably increases the margin per product.

- **New Revenue Models & Customer Loyalty:**
  The shift from one-off transactions to circular business models—such as Product-as-a-Service, remanufacturing, or take-back concepts—creates reliable, recurring revenues and solidifies direct, long-term ties to the customer base.

- **Automatic Risk Protection & Compliance:**
  While companies operating under linear logic suffer from growing regulatory pressure (e.g., Digital Product Passport, CO_2 taxation, ESG reporting obligations), a circular organization fulfills these requirements through its very design. This secures unrestricted market access and provides advantages with investors, banks, and partners.

- **Clear Orientation Amid Uncertainty:**
  Instead of losing track in a clutter of countless individual measures, working with circular target visions provides a clear strategic compass. It enables targeted action and gives executives and teams a motivating, shared direction for the future viability of the company.

The CE first approach reduces complexity for companies by starting from the concrete picture of an operational circular business, making entry in the here and now attractive and feasible. As a method, backcasting offers a way to gain a new perspective on the current state and development spaces of one's own company starting from this future vision.

The 5 Dimensions of a CE first Organization

To counteract any fear of overwhelming the organization with a transformation toward circularity right from the start, we break down complexity into manageable fields of action. To make the actual impact of the Circular Economy measurable, evaluable, and manageable step-by-step, the CE first approach can be analyzed within a company along five central dimensions. The core assumption of CE first is that companies acting through the targeted use of CE principles in at least one of these dimensions perform demonstrably more successfully than those with a purely linear orientation.

Dimension 1: Business Strategy to CE

At the center is the realignment of the business model: circularity becomes the strategic core of value creation, revenue mechanisms, and competitiveness. Strategic control focuses on decoupled resource growth, circular models like Product-as-a-Service, tight partner ecosystems, and adapted business key performance indicators (KPIs).

Dimension 2: Integrated Design on the Basis of CE

As a technical foundation, this dimension translates strategy into concrete engineering and system design along the entire product lifecycle. By applying Design for Circularity, long-lasting, modularly dismantlable products as well as integrated take-back logistics and digital data infrastructures are developed.

Dimension 3: Leadership with CE Background

This dimension encompasses the strategic leadership level, which acts as an enabler of the transformation process through a circular mindset, change competence, and clear target vision leadership. Through adaptable leadership approaches such as Leadership-as-a-Service, management resolves goal conflicts and creates agile action and accountability for teams.

Dimension 4: Mindset & Culture Set to CE

It forms the cognitive foundation of the organization by replacing linear mindset patterns with a decentralized, agile, and appreciative corporate culture. By internalizing circularity in everyday work, cross-functional networking, an appetite for experimentation, and an anchored sense of responsibility for resources emerge.

Dimension 5: Training of People with CE

The fifth dimension focuses on the continuous, systematic qualification and building of new technical and methodological skill sets within the workforce. Through interdisciplinary learning platforms and training programs, the business develops into a learning organization that empowers all corporate areas for circular processes.

The Backcasting Method: Future Scenarios in the CE first Context

In the CE first context, scenarios are not speculative previews or trend forecasts, but functional design spaces. Such a scenario describes concretely and in detail how a company and its entire value creation network operate when circularity is already 100% reality, technologically mature, and economically taken for granted—very much in line with the central guiding question: "What if CE were real already?"

An effective CE first scenario unfolds its transformative power through core elements: As a functional target vision, it details what a value creation system looks like in which waste is completely eliminated. It is characterized by systemic holism, viewing the organization not in isolation, but as an integrated node in closed material, logistics, and partner loops. At the same time, this anchored circular state forms the reliable foundation for methodological backcasting: working backward consistently from the functioning future, it derives what processes, data structures, competences, and business models must be developed today. Finally, the scenario translates abstract sustainability terms into the concrete everyday experience of all corporate areas—from changed procurement logic in purchasing to novel distribution channels and circular service processes like refurbishment and remanufacturing. As a practical management tool, CE first scenarios thus strip multi-layered transformation of its intimidation, turning a vague vision of the future into a tangible, testable prototype for targeted action in the here and now.

Who is the CE first Approach Intended For?

The CE first approach is a universal framework for action orientation. It is aimed primarily at small and medium-sized enterprises and leaders: For owners, managing directors, and decision-makers in SMEs, CE first offers a way out of paralysis caused by bureaucracy and complexity. It provides leaders with the tools to seek future viability not via the tedious detour of minor corrections, but to realign their companies with a clear mindset and a new business focus originating from the target state.

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Carls Zukunft GmbH, Diakonissenstr. 1, 04177 Leipzig.
luise@carls-zukunft.de