GREEN TRANSITION

HANDBOOK FOR MICRO, SMALL AND MEDIUM-SIZED BUSINESSES

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DISCLAIMER

This handbook is designed for educational and informational purposes only. The content was developed by the initiative and request of the German Sparkassenstiftung for International Cooperation (DSIK), Georgia Office. The development of the content was funded by the German Federal Ministry for Economic Cooperation and Development (BMZ) in 2024, in the framework of the project “Socio-Ecological Transformation of the Rural MSME Sector and Sustainable Financial Services”. The content represents the views and opinions of the author. It does not necessarily reflect the views of the BMZ.

While the handbook provides general guidance on sustainable business practices and Green Economy Transition (GET), businesses seeking to implement more advanced solutions are encouraged to consult with professional advisors for tailored support.

This publication is part of the Investors Council Secretariat’s broader Green Economy Transition (GET) agenda in Georgia, which aims to support micro, small, and medium-sized enterprises (MSMEs) in adopting sustainable and competitive business models that contribute to the country’s sustainable economic growth and environmental goals.

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Glossary

Climate Change:

Long-term shifts in global temperatures and weather patterns, mainly caused by human activities, leading to environmental and business risks such as resource scarcity, supply chain disruptions, and regulatory changes.

ESG:

A perspective on environmental, social and governance topics with the consideration of resulting returns, costs and risks. ESG is often described as a financial view on sustainability.

Good Housekeeping Practices (GHP):

A simple, low-cost action to reduce waste and improve efficiency by keeping the workplace clean, organized, and well-managed.

Green Economy Transition (GET):

The process of shifting business and economic activities towards sustainable models that promote resource efficiency, reduce environmental impact, and support long-term economic growth.

Life Cycle Thinking (LCT):

Involves evaluating the possible environmental effects a product may cause throughout its entire lifespan, from the extraction and processing of raw materials, through its production, transportation, and use, to its end-of-life stages.

Resource Efficient and Cleaner Production (RECP):

a continuous improvement approach that helps businesses use resources more efficiently while reducing waste, emissions, and environmental risks. RECP aims to enhance productivity, lower costs, and minimize environmental impact.

Executive Summary

The challenges we face today demand a shift away from the traditional business-as-usual model towards integrating sustainable practices and rethinking current production patterns to ensure long-term prosperity.

This handbook serves as a practical guide for MSMEs, presenting sustainability not just as an environmental obligation but as a strategic business opportunity. It highlights how adopting green practices can deliver tangible benefits, including cost savings, improved efficiency, access to new markets, enhanced brand reputation, and easier access to green finance.

By consolidating information from diverse sources, guidebooks, manuals, research papers, and materials from international organizations, academia, and business experts, this handbook organizes fragmented knowledge into a clear, practical format, making it easier for businesses to understand and apply.

While developed with a focus on Georgian companies, the handbook's concepts and tools are equally relevant for businesses in other developing countries. The strategies outlined can be adapted to various contexts, supporting companies in their transition to more sustainable business models.

It offers an introductory overview of sustainable practices and guidance for businesses starting their Green Economy Transition (GET). However, companies seeking to implement more advanced solutions will require external professional support with expertise in sustainability and resource efficiency. Engaging such expertise is a strategic investment that can enhance financial performance, boost operational efficiency, and strengthen long-term competitiveness.

Climate Change and the Concept of Sustainability

Climate Change and the Concept of Sustainability

Rising temperatures, extreme weather events, and changing rainfall patterns are already affecting how businesses operate.

✅ Key Takeaway:

Climate change is no longer just an environmental issue – it's a business issue.

From disrupted supply chains and rising energy costs to changing customer preferences and new government regulations, the impact of climate change is becoming more visible every day.

What Is Climate Change?

Climate change refers to the long-term shift in global temperatures and weather patterns. While climate can naturally vary, human activities, especially burning fossil fuels like coal, oil, and gas, have significantly accelerated this process. These activities release greenhouse gases (GHGs) into the atmosphere, which trap heat and cause global temperatures to rise.

What Is Sustainability?

Sustainability is about meeting the needs of today without compromising the ability of future generations to meet theirs. In a business context, it means operating in a way that is environmentally responsible, socially inclusive, and economically viable.

⚠ Business Implications:

- Higher costs due to damaged infrastructure or supply disruptions
- Scarcity of raw materials like water or agricultural products
- Regulatory risks such as carbon pricing or stricter environmental standards.
- Changing consumer behavior as people seek more sustainable products.

Climate Change and the Concept of Sustainability

Sustainable businesses aim to:

- Use resources more efficiently (e.g. energy, water, raw materials)
- Reduce waste and emissions!
- Treat employees fairly and support local communities.
- Plan for long-term resilience, not just short-term profit

Why It Matters for Your Business

🎯Adopting sustainable practices is no longer optional – it's becoming essential for competitiveness and survival. Here's why:

- Customers are changing. A growing number of people prefer to buy from environmentally and socially responsible businesses.
- The investors are watching. More financial institutions now assess environmental and social risks before investing.
- Regulations are tightening. Governments are introducing stricter rules on emissions, waste, and energy use.
- Efficiency saves money. Many green practices help reduce operational costs, such as switching to energy-efficient equipment or reducing material waste.

✅ Key Takeaway:

Sustainability helps your business become more efficient, resilient, and attractive to customers, partners, and investors. It's not just good for the planet – it's good for business.

Climate Change as a New Type of a Business Risk

✅ Key Takeaway:

Climate Change brings unconventional risks that go beyond traditional business concerns

Business operations are inherently subject to a wide spectrum of risks. While traditionally these have been categorized as conventional, including inflationary factors, shifts in consumer preferences, regulatory uncertainty, political volatility etc., the global landscape is increasingly shaped by a new class of complex, non-linear threats, such as Climate Change.

A single environmental shock can simultaneously compromise physical infrastructure, damage distribution or trade routes, and disrupt supply chains by limiting access to critical inputs. Such risks are not only difficult to anticipate but also pose significant challenges to strategic planning and long-term investment decision-making.

Type of Risk	Description	Impact on Business	Urgency
Physical Risks	Extreme weather events	Infrastructure damage	**High**
Regulatory Risks	New climate–related laws	Market access loss; extra costs	Medium–High
Financial Risks	Insurance and finance barriers	Higher cost of capital	Medium
Resource Risk	Scarcity or price volatility in water, energy, and raw materials	Higher input costs, reduced production capacity	Medium–High
Reputational Risks	Negative public perceptions	Talent or trust loss; media backlash; reduced loyalty	Medium

Figure 1: Climate Risk Matrix for Businesses. (Source: Compiled by the author from EU (2010), UNEP (2015), Zurich (2024))

Physical Risks

Physical risks are among the most common and immediate ways climate change impacts business operations. These risks can disrupt normal activities with little to no warning and are often difficult to prevent. Physical risks can directly damage company assets, but their effects also extend indirectly. For example, if a supplier is affected by extreme weather, it can disrupt your entire supply chain. Similarly, if your target market experiences a climate-related event, it may hinder your ability to distribute products or maintain sales.

⚖️Regulatory Risks

Governments around the world are introducing new regulations in response to climate change, with a primary focus on energy- and emissions-intensive industries. Georgia is no exception. Among other initiatives, the country is planning on advancing the Extended Producer Responsibility (EPR) schemes and Monitoring, Reporting, and Verification (MRV) systems — with many more regulations expected in the foreseeable future. These rules, along with associated fines and enforcement mechanisms, are designed to encourage businesses to reduce their environmental impact.

Importantly, it's not just domestic regulations that businesses need to consider. International policies can also have significant implications. For example, the EU Green Deal and instruments like the Carbon Border Adjustment Mechanism (CBAM) are reshaping global trade. These frameworks require companies, both within and outside the EU, to move away from the traditional 'business as usual' approach and adapt to more sustainable models of operation.

💸Financial Risks

Banks and investors are now assessing how climate risks affect the stability of a business before granting loans or investment. If your operations are vulnerable to flooding, or if your industry is seen as "carbon-intensive," you may face higher interest rates, tighter loan conditions, or outright rejection. Insurers, too, are reducing coverage in high-risk sectors or locations, which raises operational vulnerability.

Resource Risk

Climate change changes ecosystems and weather patterns impacting access to water, energy, and agricultural or mineral inputs. This can lead to price volatility, limiting, or complete supply breakdowns. Businesses dependent on natural resources is especially at risk, especially in regions like Georgia where hydropower or agriculture plays a large role.

📉Market Risk

Consumer and investor behavior is shifting rapidly. Businesses that ignore sustainability are increasingly viewed as outdated or risky. Buyers, especially large retailers and international partners, may demand environmental standards from their suppliers. If you can't show that you are managing your emissions, waste, and energy use, you may lose tenders, contracts, or shelf space.

📢Reputational Risk

In a connected world, reputational damage can spread quickly. Media, NGOs, and even customers now hold companies accountable for their environmental actions. A single news article or social media post about poor practices can damage your brand, especially among younger customers and jobseekers who prioritize value-driven businesses.

⚠️Business Implications:

- Ignoring climate risks can lead to financial losses and missed opportunities.
- New regulations and compliance requirements will increasingly shape the market landscape
- Customer and investor expectations are shifting toward climate-responsible businesses.

The Concept of Triple Bottom Line (TBL)

✅ Key Takeaway:

Businesses that adopt TBL reduce risks, increase efficiency, and improve brand trust.

Traditionally, businesses used to measure success using a single metric such as PROFIT. But today's economy demands more. With rising stakeholder expectations, growing environmental concerns, and prioritizing corporate responsibility, businesses must go beyond the financial return concerns, they also have to consider the social and environmental impact. This is where the Triple Bottom Line (TBL) framework comes in.

Profit: Definitely. When speaking about businesses from a Triple Bottom Line (TBL) perspective, profit remains essential—but it is no longer about short-term maximization. Instead, it refers to profits generated through cost savings from sustainable resource use, improved access to financing from ESG conscious investors and banks; and competitiveness in export markets that require sustainable compliance (e.g., the EU's CBAM or SMGP).

People: People are the most valuable asset of any business. This includes employees, suppliers, customers, and others, directly or indirectly related to the business. The 'People' dimension focuses on creating fair, inclusive, and supportive environments. When people feel valued and treated fairly, they are more motivated, while motivated individuals are more productive and efficient.

It's important to remember that efficiency is not limited to material resources; it also applies to human resources. Therefore, fostering a fair and inclusive environment is not only a matter of corporate reputation, it also directly contributes to improved productivity among employees.

Planet:

Environmental issues such as climate change, resource depletion, and waste pollution directly affect business continuity and cost structures. Companies that proactively manage their environmental impact are better positioned for the future.

📋 Business Checklist:

- Have you assessed your social and environmental impact alongside financials?
- Are your employees, suppliers, and customers benefiting from your practices?
- Are you reducing waste, emissions, and energy costs?
- Can you market your business as sustainable to attract new clients or partners?

The Benefits of Adopting Green Practices

The Benefits of Adopting Green Practices

One might ask: what are the real benefits of adopting sustainable business practices, and why should MSMEs care? As it was discussed, the decision to **go green** goes far beyond environmental concerns, it involves integrating practices that enhance overall performance and boost productivity. Quite often, going green is seen as a new source of **competitive advantage** for businesses.

Investing in a green transition within the company can stimulate **competitive advantage** through unlocking a wide range of benefits:

💰 **Cost Savings** through energy and resource efficient practices. As an example, a small enterprise can reduce energy costs by 10 – 30% through affordable upgrades such as LED lighting, better insulation, and energy-efficient appliances.

🏛️ **Regulatory Compliance:** As part of its international climate commitments, Georgia is introducing new environmental standards. Meeting new environmental standards helps businesses maintain market access and avoid future penalties.

👷**Higher Productivity:** A clean, organized, and environmentally conscious workplace contributes to employee morale and motivation, which in turn enhances productivity.

🌟 **Enhanced reputation & customer loyalty:** there is a growing number of customers willing to change consumption habits to reduce their environmental impact.

🏦 **Improved Access to Green Finance:** Financial institutions such as the EBRD, GGF (Green for Growth Fund) etc. now prioritize provision of financing and technical assistance to businesses adopting green technologies.

Human Resource Benefits: Especially the younger generation is sensitive for climate action of companies and, in the "war for talents", companies with higher sustainability standards are likely to attract and hold better employees.

🚀 **Market Diversification Opportunities:** Businesses that actively communicate their sustainability efforts gain a competitive edge, particularly in sectors like exports, tourism, food production, and crafts.

Greening a Business as a Path to Greater Efficiency

For many MSMEs, the idea of going green may seem like a cost burden. However, sustainability and efficiency go hand in hand. Greening a business often starts with improving how resources, like energy, water, raw materials, and time are used. These improvements lead not only to environmental benefits but also to significant cost savings and productivity gains. While 'efficiency' is often related to cost minimization, it is more accurately defined as a tool for maximizing the benefits relative to costs[1].

To be more precise, becoming more sustainable is one of the smartest ways to become more efficient, thus among other benefits, reduce operational costs.
To fully realize the benefits of adopting efficiency practices in MSMEs, it is important to first redefine what efficiency means. Greater value can be unlocked when efficiency is understood as the ability to analyze, identify, and eliminate costs across operations that do not add value.

[1] Tracy Dathe et al., Corporate Social Responsibility (CSR), Sustainability and Environmental Social Governance (ESG) (2022).

Greening a Business as a Path to Greater Efficiency

Moreover, it is essential to recognize that the full potential of efficiency, or any sustainability-related practice, can only be achieved when these efforts are **integrated across the entire value chain**[2].

Achieving meaningful and measurable efficiency gains requires more than ad-hoc actions. It demands structured tools and methodologies that guide businesses in identifying inefficiencies, evaluating environmental impacts, and prioritizing improvement areas. Two such widely recognized approaches, **Life Cycle Assessment (LCA) and Resource Efficient and Cleaner Production (RECP),** offer practical pathways to embed sustainability and efficiency into both strategic decision-making and day-to-day operations. The following sections explore these tools in detail and demonstrate how they can help micro, small, and medium-sized enterprises unlock their full efficiency potential.

[2] Dathe et al., Corporate Social Responsibility (CSR), Sustainability and Environmental Social Governance (ESG).

Understanding the Lifecycle Approach

Understanding the Lifecycle Approach

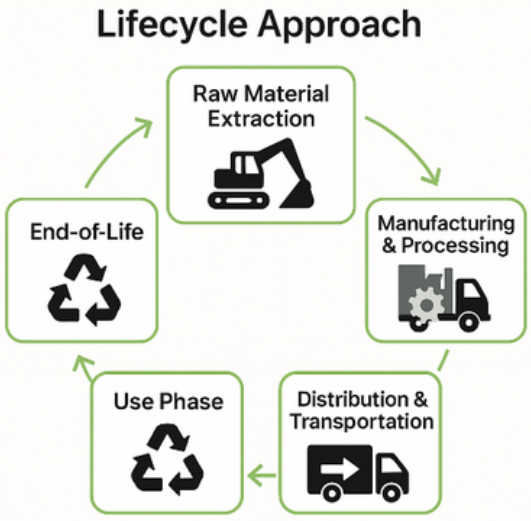
✅ Key Takeaway:

LCA is a mindset that helps us recognize that our everyday decisions are linked to a larger chain of processes and impacts.

To make the first steps towards greening existing business practices, it is beneficial to get familiar with the concept of the lifecycle assessment approach (LCA). This approach encourages businesses to look beyond their immediate operations and consider the full journey of their products or services — from raw materials to end-of-life disposal [3].

And it's true, the environmental footprint of a product or service doesn't originate at the point of sale, it begins much earlier, starting with the extraction of raw materials and the production of energy.

These inputs then move through stages such as manufacturing, transportation, usage, and finally end-of-life options like recycling, reuse, or disposal.
Taking a life cycle approach means understanding how our decisions affect each of these stages, allowing us to make informed trade-offs that benefit the environment, the economy, and society[4].



Efficient utilization of the lifecycle approach in everyday decision-making requires its integration into existing processes and workflows. This may involve incorporating lifecycle assessment (LCA) considerations into product design, supply chain management, and strategic planning initiatives.
Integrating LCA with existing practices ensures that it is not treated as a standalone activity, but rather as an essential part of overall business operations.

[3]EU, A Guide for Business and Policy Makers to Life Cycle Thinking and Assessment, 2010, https://doi.org/10.2779/91521.
[4] UNEP, Why Take A Life Cycle Approach? (2004).

Steps of LCA Implementation

The practical implementation of the LCA approach requires a series of clearly defined steps that lead to tangible results.

🔍🎯 Step 1: Definition of Goals and Scope

Defining the goal and scope of an LCA involves determining **what** is being analyzed, **how** the analysis will be conducted, and to **what extent** the assessment will cover the product or process lifecycle.
For example:

- **A small furniture workshop** may conduct an LCA to compare the environmental impact of locally sourced wood vs. imported materials, focusing only on raw material extraction and transport stages.
- **A dairy producer** might aim to understand the full lifecycle emissions of a bottle of milk—from feed production to packaging disposal—by setting a broader scope.

A clearly defined goal and scope helps ensure the LCA is relevant, focused, and aligned with business decisions—whether the decision is about choosing between suppliers, redesigning a product, or reporting sustainability performance[5].

[5] UNEP, Guidance on Organizational Life Cycle Assessment (2015), www.lifecycleinitiative.org.

Steps of LCA Implementation

📊📦 Step 2: Inventory Analysis

The inventory phase of Life Cycle Assessment involves gathering data, modeling systems, and generating Life Cycle Inventory results aligned with the previously defined goals and scope of the assessment. The inventory should account for all relevant inputs and outputs. For operations directly under organizational control, all input and output must be included. When it comes to the broader value chain, it's advisable to incorporate data from indirect activities that fall within the system boundary[6].

This stage of analysis can be highly **complex** due to the often-complicated nature of production processes and supply chains. As a result, the Life Cycle Inventory (LCI) phase is typically the most time-consuming and labor-intensive part of a Life Cycle Assessment[7].

🌍⚖️ Impact Assessment

In the previous steps, the focus is on determining what needs to be measured and collected. This is followed by the collection and organization of actual data. The next phase, however, involves assessing the significance of the impacts identified in the previous stage.

This impact assessment process can be broken down into three key tasks:

- **Defining impact categories** – This means clearly identifying what needs to be measured. For instance, one might assess the climate change impact of a specific product in terms of CO_2 equivalents.
- **Classifying the Life Cycle Inventory (LCI)** – In this step, the collected inventory data is assigned to the relevant impact categories.
- **Characterizing or measuring the impact** – Here, all the relevant emissions and resource uses are converted into common equivalents (e.g., CO_2-eq) and summed to determine the total impact in each category[8].

[6] UNEP, Guidance on Organizational Life Cycle Assessment.
[7] Joost G Vogtländer, A Practical Guide for Students, Designers and Business Managers A “Fast Track” Guide to LCA (2023), www.ecocostsvalue.com.
[8] UNEP, Guidance on Organizational Life Cycle Assessment; Vogtländer, A Practical Guide for Students, Designers and Business Managers A “Fast Track” Guide to LCA.

Steps of LCA Implementation

🧠📝 Interpretation

Proper interpretation of the data gathered in the previous phases is crucial for making informed decisions. To guide this process, existing ISO standards for Life Cycle Assessment provide a useful framework:

- **Identifying significant issues** based on the results from the Inventory and Impact Assessment phases;
- **Evaluating the quality of the study,** including its completeness, sensitivity, and consistency;
- **Drawing conclusions,** acknowledging limitations, and providing recommendations.

⚠️Business Implications:

- LCA helps both the producers and consumers make informed decisions
- LCA helps both the producers and consumers uncover **hidden environmental impacts**
- LCA is an effective tool to identify **efficiency opportunities** across the value chain
- LCA is widely used to strengthen company's sustainability credentials

Resource Efficient and Cleaner Production (RECP) Approach

Given today's environmental challenges, which include rising resource costs, increasing environmental pressures, and a complex regulatory landscape, **Resource Efficient and Cleaner Production (RECP)** is yet another widely used approach for businesses to improve their environmental performance while simultaneously boosting their competitiveness[9].

RECP serves as a continuous improvement tool for companies, with a strong focus on enhancing production efficiency and protecting the environment[10]. A review of the available literature reveals that RECP principles can be grouped into the following core areas:

♻️ **Input Optimization:** use necessary materials, water, and energy more efficiently throughout production cycles.

🚯 **Waste Reduction:** minimization of emissions, and solid waste generation at the source

🛠️ **Product Improvement:** design products that use fewer resources, are easier to reuse and recycle, and have less environmental impact.

[9] EU4Environment, "Resource Efficient and Cleaner Production," Eu4Environment, 2024.
[10] GIZ, Resource Efficient and Cleaner Production (RECP) Guidelines for Jordanian Small Dairy and "Bakery and Arabic Sweet" Enterprises (2022).

Resource Efficient and Cleaner Production (RECP) Approach

RECP Implementation Steps

As with any other approach, the implementation of RECP involves specific steps and phases that must be followed to fully realize its benefits.

Phase 1: Planning and Preparation

This specific step sets the groundwork for a successful initiative.

✅ 1.1. Securing Leadership Support

Begin by gaining commitment from top management. Their support ensures access to resources and signals the importance of RECP to the entire organization.

👥 1.2. Forming a Dedicated RECP Team

Establish a multidisciplinary team to lead the RECP process. The group should include staff from various departments with diversified expertise.

🏭 1.3. Conducting an Initial Walk-Through

Perform a basic site review to identify obvious inefficiencies and gather operational insights - data collection and establishment of a baseline.

🎯 1.4. Investigating Root Causes

Rather than just treating the symptoms, explore the underlying reasons behind resource losses or negative environmental impact.

💡 1.5. Generating and Screening RECP Options

Brainstorm and list potential RECP improvements. Each option should be evaluated based on costs, ease of implementation, and expected environmental and economic benefits.

📅 1.6. Developing the Action Plan

Summarize your findings in a structured action plan that outlines priority measures, timelines, responsible staff, required resources.

Resource Efficient and Cleaner Production (RECP) Approach

Phase 2: Implementing the RECP Options

This phase focuses on putting the identified improvements into action. It primarily focuses on initiating practical measures, engaging employees, leveraging financial support, and institutionalizing improvements.

🧹 2.1. Start with Simple and Low-Cost Solutions

Begin by applying Good Housekeeping (GHK) practices and other low- or no-cost RECP measures. These can include operational adjustments such as:

- ·Turn off unused equipment
- ·Eliminate leaks and spills
- ·Using materials more efficiently

These actions are quick to implement and often deliver immediate savings.

👩‍🏫 2.2. Build Staff Capacity

Conduct tailored capacity-building activities for personnel to ensure that staff have a clear understanding of new practices or procedures. Capacity building activities should cover:

- ·RECP principles and goals
- ·Safe and efficient use of resources
- ·Workplace hygiene and health
- ·Cost awareness and waste reduction

Informed staff are better equipped to sustain and improve cleaner production practices.

💵 2.3. Explore Financial Support Opportunities

Identify potential funding sources from national SME support programs, or development funds. The funds should cover the cost of advanced RECP measures.

This may include:

- ·Energy efficiency loan schemes
- ·Environmental upgrade incentives
- ·Technical assistance programs

Tapping into these resources can reduce the financial burden of more complex changes.

🔁 2.4. Monitor, Adjust, and Institutionalize

Track the implementation of each improvement measure. Use the results to:

- ·Verify actual performance gains
- ·Document lessons learned
- ·Refine or scale up actions

Additionally, update internal systems to reflect these changes by:

- ·Enhancing cost accounting procedures
- ·Introducing better health, safety, and hygiene protocols
- ·Establishing or improving internal environmental management systems

Embedding these changes into daily operations helps ensure that RECP becomes a long-term part of your business strategy.

Phase III: Monitoring Performance

This phase focuses on tracking progress and ensuring that the implemented RECP measures are delivering the expected results.

📊 3.1. Monitor Resource Use and Performance

Establish a simple system to regularly track improvements in the use of energy, water, raw materials, and other key inputs. Monitoring helps ensure that gains in efficiency are sustained and that any setbacks are quickly identified.

✅ 3.2. Verify Implementation of Actions

Review whether the recommended RECP measures were properly executed. This includes checking:

- ·If actions were carried out as planned
- ·If staff are following new procedures
- ·If equipment upgrades or changes are working as intended

Verification ensures accountability and allows you to measure actual improvements against baseline data.

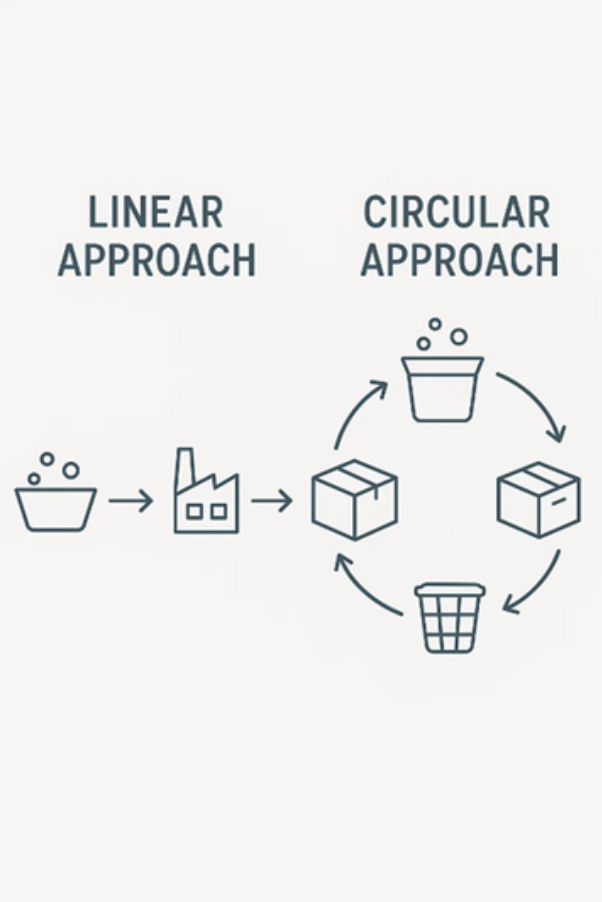
Theoretical Foundation of Circular Business Practices

Theoretical Foundation of Circular Business Practices

In order to have a better understanding of how business owners can successfully shift from conventional Linear Models to more sustainable practices, it is essential to analyze the theoretical foundations that guide circular economic thinking. These theories provide the rationale for designing systems that are oriented at waste minimization, resource regeneration, and creation of long-term values[11].

Linear vs Circular Mindset

The business-as-usual approach is primarily built on a more traditional, Linear economic model. The model of production and consumption which is based on 'take-make-waste' principle. It follows the flow that involves extraction of raw materials, manufacturing goods, utilizing them, and discarding them as a waste. This specific approach assumes endless supply of natural resources



and neglects the long-term environmental, economic, social consequences of generated waste, and resource depletion.

[11] EIB, The EIB Circular Economy Guide (2020).

Theoretical Foundation of Circular Business Practices

Linear approach has greatly contributed to industrial growth and mass consumption over the past century, however, it has also been linked to alarming environmental issues such as pollution, resource depletion, and climate change. In response to the shortcomings of the linear approach, the circular economy was introduced, encouraging businesses, supply chains, and economies to be viewed as complex systems of interconnected parts. It promotes holistic strategies that consider long-term impacts.

Linear vs Circular Economy

	Linear Economy	Circular Economy
Flow Model	Take → Make → Dispose	Make → Use-Reus/Recyce
Resource Use	Finite extraction, single-use	Continuous circulation of materials
Waste	Inevitable by-product	Designed out or reused as input
Value Creation	Ends after product sale	Retained through services and product loops
Environmental Impact	High pollution and resource depletion	Minimizes waste and regenerates ecosystems

Figure 2: Linear vs Circular Economy (Source: Compiled by author from WBSD (2015), Plant Chicago (2020), EIB (2020))

[11] EIB, The EIB Circular Economy Guide (2020).

The Benefits of Adopting Circularity

Since the primary aim of this handbook is to highlight the economic and financial benefits of adopting sustainability practices, it is important to emphasize that sustainability does not start and end with circular economy approaches. Businesses can begin their journey by first addressing low-hanging fruits, such as improving energy and resource efficiency, which often bring immediate cost savings. The next step involves adopting return-effective measures, including investments in renewable energy or sustainable mobility solutions. Finally, as capacities and experience grow, companies can advance toward strategic circular economy models.

In this broader perspective, circular practices represent more advanced stage of sustainability integration, offering not only environmental gains but also substantial economic and strategic advantages. [12].

The benefits of adopting circular business practices can be categorized into distinct sub-groups, reflecting their impact on cost efficiency, revenue generation, market positioning, risk management, and access to sustainable financing.

ECONOMIC AND FINANCIAL BENEFITS OF ADOPTING CIRCULAR BUSINESS PRACTICES

Benefit	Impact on Business
↓ Cost Reduction	Lowers material, energy, and waste management expenses
New Revenue Streams	Generates income through services, resale, and by-products
Competitive Advantage	Differentiates brand in eco-conscious markets
Supply Chain Resilience	Reduces dependency on scarce resources and external shocks
Access to Green Finance	Opens opportunities for green investments and incentives

Figure 3: Economic Benefits of Adopting Circular Business Practices (Source: Compiled by author from WBSD (2015), Plant Chicago (2020), EIB (2020))

[12] Plant Chicago, The Circular Economy Toolkit for Small Businesses (2020).

Most Common Circular Strategies

Incorporating **circular strategies** into business operations is no longer a niche practice, it has become a fundamental approach for companies seeking to reduce costs, mitigate risks, and unlock new revenue streams while contributing to environmental sustainability. While the specific strategies may vary depending on the sector and business model, the following approaches are widely recognized and adopted across industries:

1. Design Models
2. Resource Models
3. Lifetime Extension Models
4. Platform (Sharing) Models
5. Product-as-Service Models (PAAS)
6. End-of-Life Models

Circular Business Model	Description	Focus	Revenue Model
Resource Models	Recover and reuse parts and raw/processed materials at end-of-life phase.	Dismantle, Recover, Reuse, Remanufacture	Sale of residual flows, Recyclates
Design Models	Design products/processes to fit within circularity logic, enabling repair, recycling, and lifetime extension.	Product & Production Process Design	Sales of designed products, Functional use, Maintenance
Lifetime Extension Models	Extend lifespan through repair, refurbishment, remanufacturing, and reuse.	Maintenance, Reuse	Product-as-a-Service (PAAS), Maintenance Services, Buy-back
Platform (Sharing) Models	Increase utilisation of existing assets through shared access platforms.	Function, Maintain, Reuse	Shared Ownership, Open Access
Product-as-a-Service (PAAS) Models	Provide product functionality through service agreements instead of ownership.	Function	Subscription, Lease, Pay-per-Use
End-of-Life Models	Manage product lifecycle through Extended Producer Responsibility (EPR) with data-driven tracking.	Function, Maintain, Reuse, Recover	Data & Analytics-as-a-Service, Maintenance Services

Figure 4: Classification of Circular Business Models (Source: 'Jonker, et.al (2022))

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Investors Council Secretariat of Georgia 2025

Sparkassenstiftung Georgia

Annex 1: Equivalents and Classifications (for RECP)

1. Energy Equivalents

Unit	Equivalent	Notes
1 kWh (kilowatt-hour)	3.6 MJ (megajoules)	Standard conversion for electrical energy
1 liter of diesel	~10.7 kWh	Energy content varies slightly based on fuel quality
1 m^3 of natural gas	~10.5 kWh	Dependent on gas composition

2. Water Consumption Classification

Classification	Description
Process Water	Water used directly in production processes (e.g., cooling, cleaning)
Service Water	Water used for sanitary and non-production purposes
Recycled Water	Water reused within processes after treatment

3. Waste Category (as per RECP)

Category	Description
Hazardous Waste	Waste with properties that are dangerous to human health or the environment (e.g., solvents, oils)
Non-Hazardous Industrial Waste	General production waste (e.g., packaging, off-cuts)
Organic Waste	Biodegradable materials (e.g., food waste, wood shavings)
Recyclable Waste	Materials suitable for reprocessing (e.g., paper, metals, plastics)

4. Emission Equivalent (CO2-eq)

Source	CO_2 Equivalent Factor	Notes
Electricity (grid average, Georgia)	~0.25 kg CO_2-eq per kWh	Approximate, based on national energy mix
Diesel Combustion	~2.68 kg CO_2-eq per liter	Standard emission factor
Natural Gas Combustion	~2.0 kg CO_2-eq per m^3	Average factor

5. Resource Efficiency Indicators (Examples)

Indicator	Formula	Unit
Energy Intensity	Total Energy Consumption / Production Output	kWh per unit of product
Water Intensity	Total Water Consumption / Production Output	m^3 per unit of product
Waste Generation Rate	Total Waste / Production Output	kg per unit of product
Recycling Rate	Recycled Waste / Total Waste Generated	%

Annex 2: Self-Assessment Checklist

The following questionnaire is based on environmental and resource efficiency practices that will help you assess your company's progress towards a Green Economy Transition. For each criterion, please rate your status on a scale from 1 to 5, where 1 means "Never" and 5 means "Always."

Category	Assessment Criteria	Score (1-5)
Energy Consumption	Do you use energy-efficient lighting (e.g., LED lights)? Do you regularly maintain electrical equipment to improve efficiency? Do you monitor electricity usage and actively work to reduce it?	
Water Consumption	Do you use water-saving devices (e.g., low-flow faucets)? Do you monitor water consumption and strive to reduce it?	
Waste Management	Do you separate waste (organic, plastic, glass, etc.)? Do you reuse or repurpose materials before discarding them? Do you compost organic waste (if applicable to your business)?	
Raw Material and Procurement	Do you purchase local or eco-friendly raw materials? Do you use recyclable or biodegradable packaging?	
Product Design and Lifecycle	Do you consider product durability and reuse potential? Can your product be recycled, reused, or repaired?	
Community and Social Impact	Do you employ local people and engage with the community? Do you ensure fair wages and a safe working environment?	
Customer Engagement	Do you share information with the public about your environmental initiatives? Do you offer eco-friendly alternatives (e.g., reusable packaging, refill options)?	

Annex 3: Sample Green Transition Action Plan Template

This suggested template provides a simple structure for businesses to plan and track their green initiatives. It can be adapted based on the specific needs and operations of each company. The template was compiled by the author after analyzing various international sources and best practices.

Goal/Objective	Planned Activity	Responsible Person/Team	Timeline	Expected Benefit (Cost Savings / Impact)	Progress Notes
Example: Reduce electricity consumption by 20%	Switch to LED lighting in all workspaces	Facility Manager	Q2 2026	Reduced electricity bills (~15% savings)	50% of fixtures replaced as of December 2025
Example: Improve waste recycling rates	Introduce waste separation bins (plastic, paper, organic)	Operations Team	Q1 2026	Divert 30% of waste from landfill	Bins purchased, staff training scheduled
Example: Lower water usage	Install water-saving faucets in restrooms	Maintenance Team	Q2 2026	10% reduction in water bills	Installation planned for May 2025

Instructions:

1. **Define Goals:** Identify clear sustainability goals (e.g., reduce energy use, minimize waste, use eco-friendly materials).
2. **List Actions:** Outline practical steps you will take to achieve these goals.
3. **Assign Responsibility:** Appoint individuals or teams accountable for implementation.
4. **Set Timelines:** Define when action should start and be completed.
5. **Estimate Benefits:** Consider how these actions will benefit your business (cost savings, efficiency gains, reputational improvements).
6. **Track Progress:** Regularly update notes to monitor status and results.

Annex 4: Environmental Performance Monitoring Sheet

This monitoring sheet provides a simple framework for businesses to track their monthly environmental performance. The template can be adapted to fit the specifics of each business. The template was compiled by the author after analyzing various international sources and best practices.

Month	Energy Consumption (kWh)	Water Consumption (m3)	Total Waste Generated (kg)	Waste Recycled (kg)	Recycling Rate (%)	Comments/Observations
Jan						
Feb						
Mar						
Apr						
May						
Jun						
Jul						
Aug						
Sep						
Oct						
Nov						
Dec						

How to Use:

1. Record monthly resource usage (electricity and water).
2. Track total waste generated and amount recycled.
3. Calculate Recycling Rate (%) = (Waste Recycled / Total Waste Generated) x 100.
4. Use the Comments section to note unusual events (e.g., production increases, maintenance works) affecting resource use.
5. Review data quarterly to identify trends and evaluate the impact of green initiatives.

MEET THE CONTRIBUTORS

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