Why sustainable and circular supply chains will win

Moving global supply chains into the new economy

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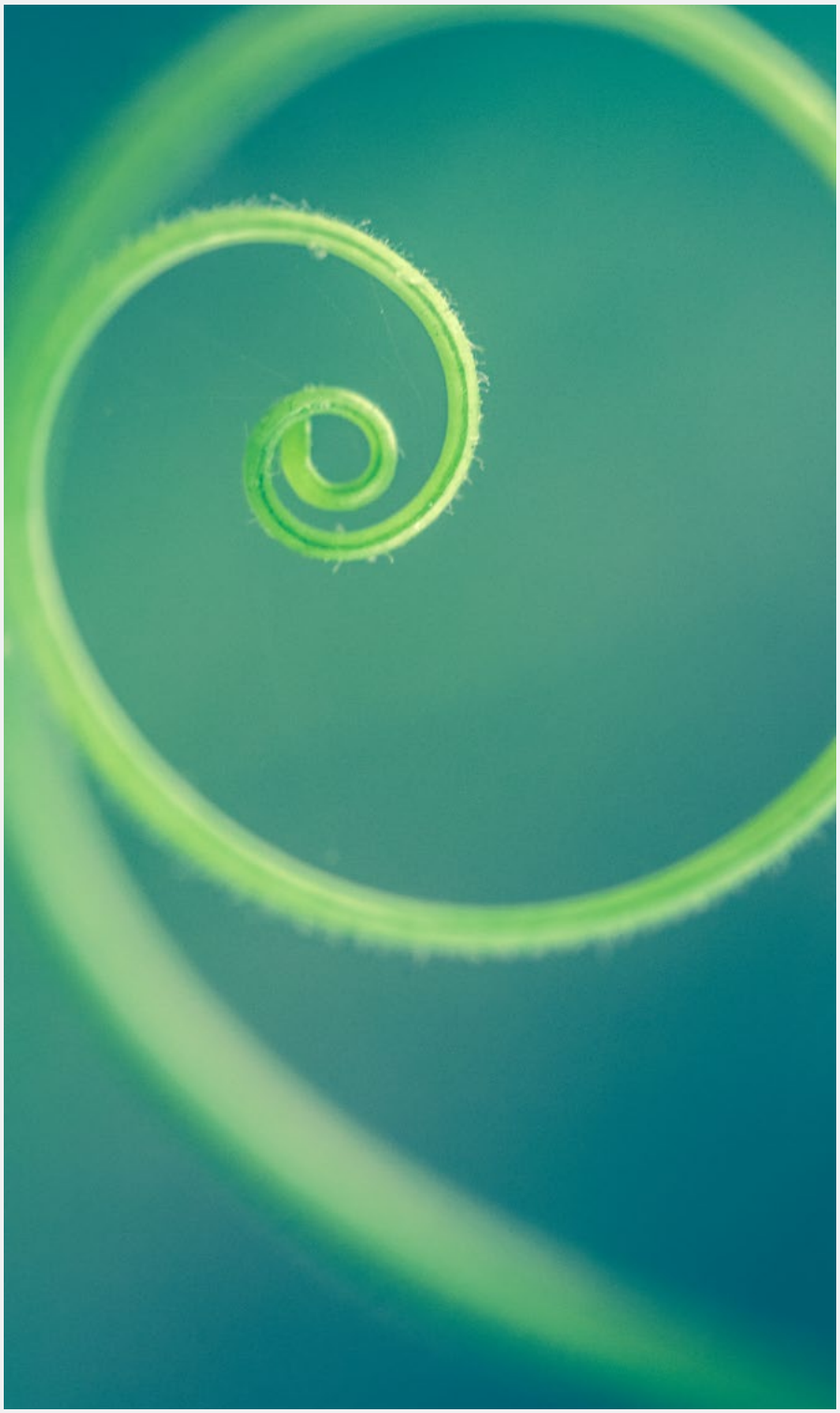
Introduction

To support decarbonization and environmentally friendly practices, governments and institutions have implemented several increasingly stringent regulations, standards, and guidelines. As a result, the issues of sustainability and circularity in supply chains are often perceived by boards of directors, corporate leaders, and investors as compliance obligations, and not as opportunities for value creation.

It's time to look at things differently. In this strategic POV, we will make the case that sustainable and circular supply chains are essential to winning consistently in the new economy of the 21st century – and that collective effort is not only desirable, but mutually beneficial.

The global economy has experienced significant changes in the past few decades. It's not often that businesses have been exposed to such a constellation of danger and opportunity. The rise of the post-industrial economy with its combination of disruptive markets, advanced production processes, quantum leaps in computing power, instantaneous global networking, and brave new frontiers in artificial intelligence, have made the job of managing modern corporations and global supply chains less and less about traditional management skills and more about visionary leadership.



Sustainability, the circular economy and circular supply chains

How do sustainability and the circular economy interrelate? Sustainability usually comprises three factors – "economic," "social," and "environmental" – as well as the aspiration for "resilient businesses in a sustainable world." The need to address pressing global issues such as climate change and extreme poverty have brought social and environmental responsibility to the highest levels of attention and priority.

As a result, society has taken action to reduce and ultimately eliminate negative environmental and social impacts, including advancing the concept of a circular economy.

"The Circular Economy" is a system where materials never become waste and nature is regenerated. In a Circular Economy, products and materials are kept in circulation through processes like maintenance, reuse, refurbishment, remanufacture, recycling, and composting. The circular economy tackles climate change and other global challenges, like biodiversity loss, waste, and pollution, by decoupling economic activity from the consumption of finite resources.

The circular economy is based on three principles, driven by design:

- Eliminate waste and pollution,
- Circulate products and materials (at their highest value),
- Regenerate nature.

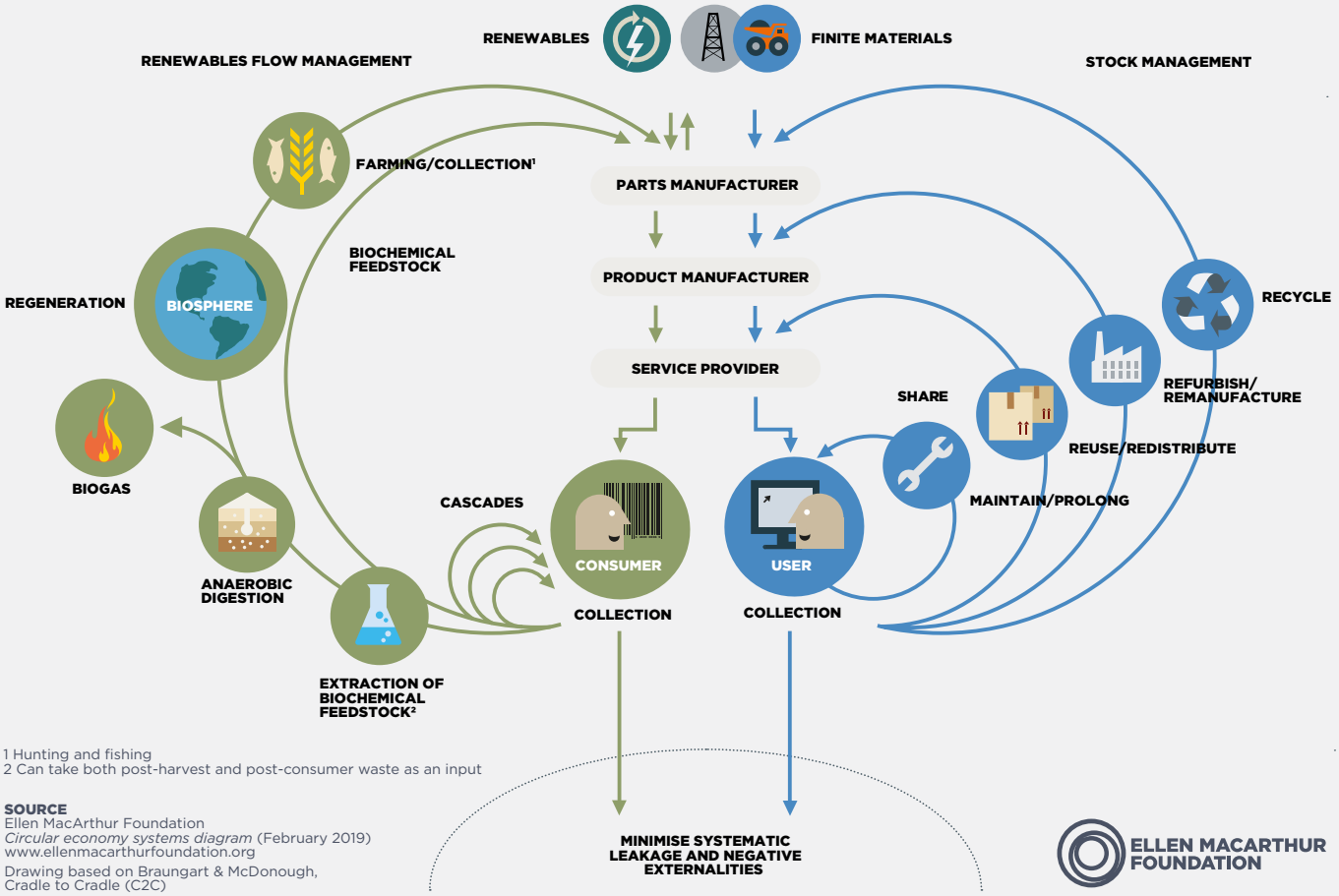
Underpinned by a transition to renewable energy and materials, the

Circular Economy is a resilient system that is good for business, people, and the environment." [1] [For illustration refer to BOX 1 – The Butterfly Diagram].

Specifically, sustainability and circularity are primarily interrelated in environmental terms, since waste, pollution, and energy and resource utilization have a significant environmental impact. For example, approximately 45% of total global greenhouse gas (GHG) emissions are linked to the production of products and food, and to their related value chains/supply chains. [2] Therefore, a circular economy is vital to address environmental sustainability.

Circular supply chains take a broader systemic approach, addressing both product design and business models, as well as extending supply chain management beyond the point of sale to circularity loops such as reuse and remanufacturing.

[1] Ellen MacArthur Foundation – What is a Circular Economy?
[2] Ellen MacArthur Foundation - Completing the Picture: How the Circular Economy Tackles Climate Change

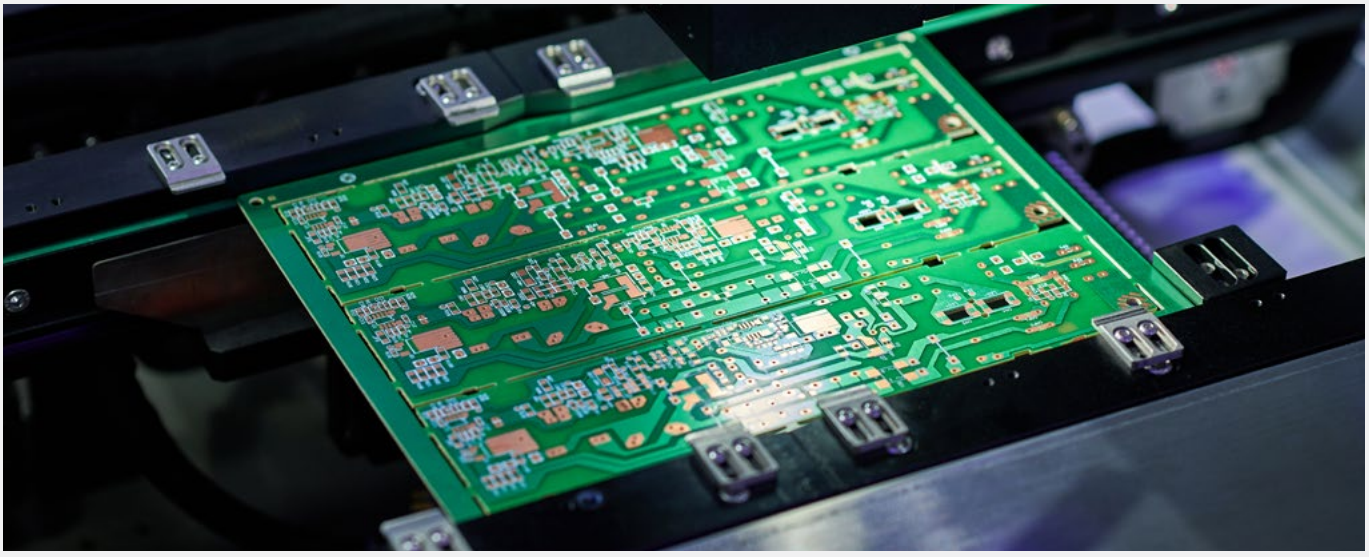


1 Hunting and fishing
2 Can take both post-harvest and post-consumer waste as an input

SOURCE
Ellen MacArthur Foundation
Circular economy systems diagram (February 2019)
www.ellenmacarthurfoundation.org
Drawing based on Braungart & McDonough, Cradle to Cradle (C2C)

The circular economy system diagram, known as The Butterfly Diagram, illustrates the continuous flow of materials in a circular economy. There are two main cycles – the technical cycle and the biological cycle. In the technical cycle, products and materials are kept in circulation through processes such as reuse, repair, remanufacture, and recycling. In the biological cycle, the nutrients from biodegradable materials are returned to the Earth to regenerate nature.

BOX 1 – EMF Circular Economy – the butterfly diagram



New rules of the game

How different is the new economy from its industrial predecessor? The speed of innovation in the new economy is breath-taking: it accelerates much more rapidly than the industrial model, leaving little room for error. In addition, the competitive arena is fierce with constant crisis and disruptions. Importantly, the new engines of growth have shifted the focus of modern capitalism from physical capital (machines) to human capital (skilled people) and raised the importance of natural capital (limited raw materials and resources). This has transferred the focus of competitive advantage from mechanical value drivers to the unlimited capacity to innovate and to adapt (human or artificial).

But the new economy is also being shaped by a values revolution, reflecting the shifting norms of the 21st century. Yes, technological changes are impressive and material, but social media has also launched a communications and ideological upheaval as profound as Gutenberg's printing revolution of the 16th century. The ecological crisis, for example, is in the process of breaking through the corporate defensive shield that once protected business from"externalities" such as carbon emissions, unlimited access to resources, or the impact of plastic waste.

Critically, in the third decade of the 21st century, we have seen significant disruption in the geopolitical world which has had a significant impact on supply chains.

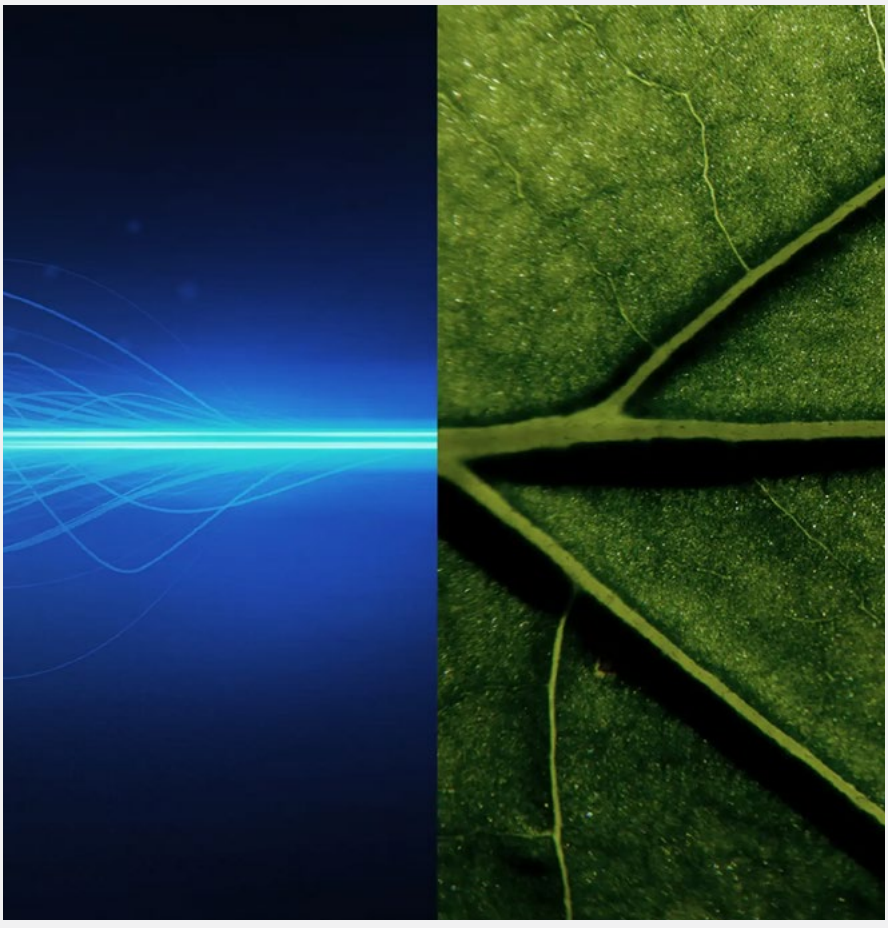
Consequently, legislation and trade agreements are already moving beyond limiting CO2 emissions and fostering energy transition. Recent initiatives are extending into circularity and the strategic importance of resource management for competitiveness.

It is in the business interests of every organization in broad ecosystems to work together on such initiatives.

The Eco-Digital Era™

"The late 2000s was a time of fascinating developments in the digital world. Entire product ecosystems were created around smartphones; organizations experimented extensively with emerging technologies such as artificial intelligence (AI); new social and cultural phenomena such as social media began to blossom; and entire industries (such as transportation) experienced seismic disruption."

At Capgemini we describe this new order as the Eco-Digital Era™.[3] These twin revolutions – ecological and digital change – have changed the strategic landscape. They are altering what and where we produce and how we distribute this value, and they demand wholesale rethinking in the corporate mindset. In a world of chronic political turmoil, constant disruptions, rising levels of uncertainty, and rapidly evolving sustainability regulations and standards, re-establishing supply chain resilience is essential. Risk management now focuses increasingly on the reliable supply of affordable resources (renewable energy and critical raw materials) and balanced operational elasticity and flexibility to absorb shocks and disruptions (supply chain resilience).



A critical feature of green and digital transitions involves redefining strategic priorities, business models and supply chains by incorporating the commercial and operational efficiencies of sustainability and circularity, as well as by gaining greater supply reliability and control. For example through re-shoring, near-shoring, and closing circularity loops. However, it also means gaining an acute awareness of emerging industrial and logistics clusters, ecosystems and social realities by adopting a sustainable value-driven mindset. In other words, it's a business proposition as much as it is driven by sustainability or technology.

"The reconfiguration of global supply chains and manufacturing capacity, with the aim of bringing them closer to, or within, domestic markets, has gained momentum in Europe and the US. According to the Capgemini Research Institute's latest report, "The resurgence of manufacturing: reindustrialization strategies in Europe and the US," 47% of large European and US organizations have already invested in reshoring their manufacturing production and 72% are currently developing a strategy for reindustrialization or already have one in place. […] Our research reveals that a significantly higher percentage (74%) of US organizations will increase investment in Mexico compared with 26% of organizations from continental Europe, owing to proximity and the United States-Mexico-Canada Agreement (USMCA)."[4]

[3] Capgemini - The eco-digital era™
[4] United States-Mexico-Canada Agreement

Harnessing digital tech and circularity bring the promise to streamline processes, enhance efficiency, and drive value creation.[5]

As a result, business leaders are faced with unprecedented complexity, and the need to embark on the twin green and digital transitions becomes inevitable. Importantly, this complexity is not sufficiently captured in corporate accounts or modern financial and management systems. Therefore, there is a vital need for clarity to fully appreciate the unprecedented scale of changes and what they imply for supply chain resilience.

A key point is the breadth of mindset that leaders need to bring to this challenge. Yes, achieving sustainability will require a great deal of granular thinking in addressing, for instance, the particularities of components, materials, and processes; but leaders will also need to conceive the issue at macro levels, standing back in order to see the forest rather than the trees. They will need to seek mutually beneficial solutions within their supply chain ecosystems; they will need to build sustainability into their entire product lifecycles, such that materials choices and end-of-life are anticipated in product design; and they will need to collaborate with partners and other players in their sectors to address the changing regulation landscape. We shall return to these considerations later in this report.

[5]Capgemini - A World in Balance 2023

A fourth (or fifth) Industrial Revolution?

Klaus Schwab, executive chairman of the World Economic Forum (WEF), was one of the first to describe the emerging economy as the "Fourth Industrial Revolution." He chose the term because, in his mind, as with earlier periods in the industrial era, technological changes were the driving force.

Later, the European Union defined the "Fifth Industrial Revolution:" "A vision of industry that aims beyond efficiency and productivity as the sole goals and reinforces the role and the contribution of industry to society. It places the wellbeing of the worker at the centre of the production process and uses new technologies to provide prosperity beyond jobs and growth while respecting the production limits of the planet. It complements the existing "Industry 4.0" approach by specifically putting research and innovation at the service of the transition to a sustainable, human-centric and resilient European industry." [6]

However, this new order is much more than a technological revolution buttressed by the sustainability and circularity revolution. While it's true that focusing on new technology, digitalization and the impacts of AI are vital, it is also important to recognize that this new economy represents a radical paradigm shift from predominantly tangible to more intangible sources of value. For example, a key intangible asset can be found in highly efficient business processes, or in strengthening "customer equity" through an enhanced supply chain as well as through product or service sustainability and circularity.

[6]European Union under the umbrella of the European Green Deal defined the "Fifth Industrial Revolution"

A new economy...

The distinction between a fourth Industrial Revolution (and/or fifth Industrial Revolution) and a "new" economy is the scope and scale of changes impacting modern capitalism. Thinking of this economy as simply the latest phase of the industrial era is misguided. The truth is the new economy is different in kind: it represents a challenge to this status quo mindset and to shareholder value. In the new economy, the dynamics of value creation shift substantially, and so demand radical transformation.

The role of management in any business is to optimize controllable assets. Today's corporate leadership faces a fundamental challenge, given that the most productive assets in their portfolio are intangible, undocumented, and absent from most financial statements.

Consider that in the lifetime of most modern managers, value creation has flipped from a tangible-assets dominated industrial economy to a modern economy where 90% of business value is embodied in intangibles FIG 1, such as advanced business processes, AI algorithms, big data, and networks of value. Furthermore, previously ignored social and environmental externalities are increasingly becoming material, and therefore they will have to be increasingly accruable and quantifiable in economic equations.

Consequently, leadership's capability to drive competitive advantage is compromised.

Intangibles are the key to value creation today. Their absence in formal financial reporting has complicated management's primary role. This has exposed the need for more and better financial reporting systems, capable of capturing this value. For example, supply chain

collaboration plays a vital role, yet investment in relationships is automatically expensed under GAAP, significantly distorting the internal return on investment calculations.

This has undermined investments designed to build "equity" in circular supply chain partnerships and relationships.

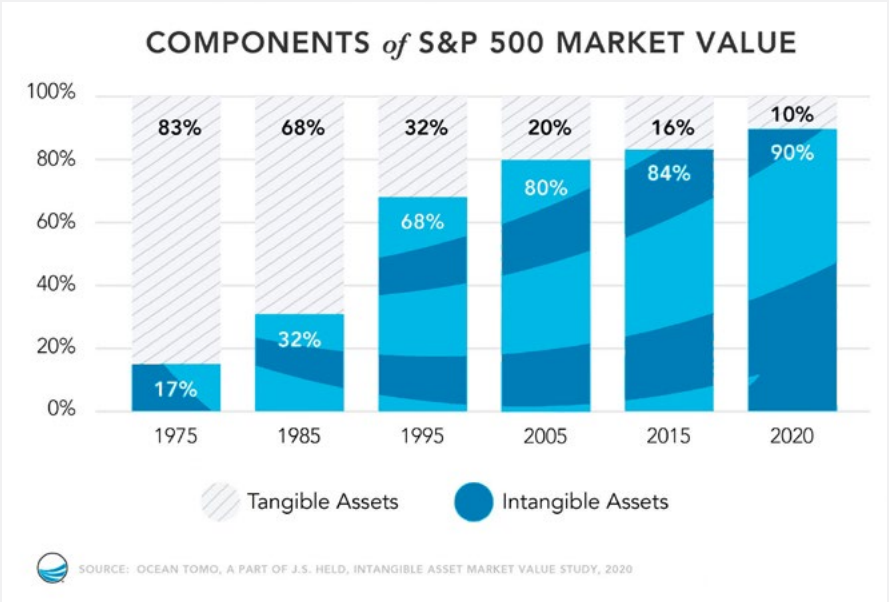


Figure 1 – Market capitalization

The networking of information, coupled with the continual rise in the importance of business data and unparalleled technology enhancements, is driving competitiveness and ultimately shaping global supply chains and organizational resilience.

How can the decision-making process be improved? With intangible assets missing from GAAP financial statements, there has been a shift in management focus from the balance sheet to the income statement. Regrettably the income statement is a short-term snapshot of the business: it doesn't provide a longer-term strategic perspective.

New approaches are necessary. Normative accounting, a parallel internal financial reporting framework for senior leadership, incorporates the Six Capitals' new value theory, capturing the vast majority of corporate value on reformulated (management) financial statements, allowing visibility of all corporate assets, unlocking a potential for more effective strategic decision making. BOX 2

The six capitals framework

Over the past half-century new digital value drivers and intangible capital forms have emerged in the marketplace and now dominate the commercial world. [7]The Six Capitals Framework builds upon the earlier three-capital model from the industrial era's neoclassical framework, which continues to underpin modern accounting. These three capitals are real capital (the manufactured elements of the production process), financial capital (cash, stocks, shares, and financial derivatives), and natural capital (resources such as mineral leases, oil and gas deposits, and water rights). The Six Capitals incorporate a broader, more comprehensive inventory of value inputs with unprecedented significant relevance.

	NORMATIVE	GAAP
Purpose of statements	Represent commercial reality of the business, management grade.	Conform to tax law, IFRS standards, ensure compatibility.
Treatment of intangibles	Full representation of all tangible and intangible assets.	Internally developed intangibles ignored or undervalued.
Treatment of development costs	Record all costs that could not otherwise be eliminated and still achieve the desired outcome.	Intangible investment expensed at source. Maximize write offs for tax purposes.
Use of statements	Internally for management purposes.	Externally for tax and investor purposes.

BOX 2 - Normative accounting vs. GAAP accounting (traditional accounting)

The framework comprises:

1) Financial capital.
2) Manufactured (real) capital.
3) Intellectual capital.
4) Human capital.
5) Natural capital.
6) Social and relationship capital.

[7]The Six Capitals framework is primarily associated with the work of the International Integrated Reporting Council (IIRC). The IIRC is a global coalition of regulators, investors, companies, standard setters, the accounting profession, and NGOs.

Reshaping global value chains based on the "new value" theory

The 21st century asset revolution driven by the Six Capitals Framework is reshaping corporate priorities while spawning the need for a new and better suite of skills, capabilities and metrics. In summary, five of the Six Capitals of the "new" economy have transformed the strategic landscape in the following ways:

- **Manufactured (real) capital** – the big-picture thinking we introduced earlier is of especial relevance to the manufacturing element of the production process. Sustainability needs to be addressed in the round. This means choosing materials and processes with the lowest carbon footprint not just at the manufacturing stage, but also at end-of-life, thereby reducing waste as much as possible (see box copy: "Building sustainability into product design: example". Without properly designed products (such as avoiding glued materials, favoring modular designs, and optimizing repairability) for some industries the shift to circular business models will be difficult, and also may not generate desired benefits.
- **Intellectual capital** – technological revolution. Over the past half-century digital technology and infrastructure has shifted radically from standalone and cumbersome mainframe computers (1960s) to the networked world (2020s). This has underpinned the digitization of the economy, providing the platform for accelerated innovation (new value theory).
- **Human capital** – there has been a shift from "best machines win" to "best people win" (because true winners innovate and rapidly translate innovation to market success).
- **Natural capital** – ecological awareness has continued its rise, and we are fast approaching planetary boundaries. What were externalities a few decades ago have become material commercial realities, as the regulatory environment strengthens considerably and access to affordable resources is subject to significant risks and frequent disruptions.
- **Social and relationship capital** – network assets have become vital sources of value and revenue generation. In addition, network disintegration is happening at the global level. The current geopolitical situations have weakened the Washington Consensus, prompting a reassessment of supply reliability and production risk, while also bringing new challenges, risks, and opportunities. Furthermore, global supply chains operate in complex multi-tier and multi-stakeholder environments exposed to constant changes and disruptions. Therefore, supply chain collaboration at the broader ecosystem level is essential for business continuity, adaptability and resilience.

How does this change in the Capitals Framework impact management decision making? Firstly, it is expanding the number and types of inputs into the value creation process, significantly increasing available options in corporate decision-making while helping to reshape the drive towards sustainability and circularity. Secondly, sustainability and circularity anticipate accounting changes towards the double materiality approach. European and North America reporting, disclosure and accounting practices (e.g. ESRS, IFRS, SEC) have just started their progressive adoption. For example, in the EU, new standards are being debated that could soon consider a public commitment to "net zero" to be a "constructive obligation," which means carbon emissions could well become a formal accounting liability.

Building sustainability into product design: example

From "Rethink: Why sustainable product design is the need of the hour," a report published by the Capgemini Research Institute in 2022:

L'Oréal launched a solid shampoo with an improved formula that lasts as long as two 250ml liquid-shampoo bottles and reduces water consumption through its fast-rinse technology. It also uses recycled cardboard packaging instead of plastic. Improvements such as these have resulted in an 80 percent reduction in primary packaging and a 30 percent reduction in greenhouse gas (GHG) emissions across the product's lifecycle compared to those of a standard shampoo bottle.

Normative accounting is designed to help in quantifying these new sources of value and to improve leadership and operational decision-making. Recording all tangible and intangible assets provides an "apples with apples" comparability between and among the various investment options senior managers need to make.

An inevitable change for businesses and management

Why the Eco-Digital transition is a trend and not a fad or a counterfeit

The first challenge for management is to understand the historical forces that are disrupting market dynamics, organizational purpose and value creation in the modern economy. We need to distinguish between trends, fads and counterfeits:

- **Trends** – are generally longer-term patterns of change, resistant to circumstances and unavoidable. Trends are inevitable; you need to get ahead of them (examples are the digital revolution, and the sustainability and circularity revolution).
- **Fads** – are dangerous medium-term forces, generally based on a "half-truth." These need to be watched carefully, being careful not to overcommit (for instance the rush to build production in China in the 1990s).
- **Counterfeits** – are rooted in a falsehood. These tend to be shorter-term kinds of social mania, with a powerful draw. But they must be avoided (the Y2K scare was a case in point).

The Eco-Digital transition is the culmination of several established and converging historical forces. The digitalization of value creation, the rise of network applications, and the inherent advance of technologies such as AI are the result of clear long-term developments. Robotics, automation and digital technologies are critical factors of modern production.

The collapse of global cooperation and the associated rise of geopolitical competition have shattered the illusion of a uniform global system. The impact on supply chains is profound. Redesigning them so that they are more effective, efficient, and resilient is now a strategic imperative of the highest order.

Take-make-waste linear supply chains have reached the tipping point

Global supply chains, designed to perform in the context of a linear economy, have built their competitive advantage mainly on privileged access to seemingly unlimited resources, cheaper labor, relaxed environmental regulations, and seamless international trade in a relatively stable world order.

Over the past 30 years, thanks to globalization and technological developments, businesses and their supply chains reached high levels of maturity, efficiency and effectiveness. But in today´s economy, take-make-waste linear supply chains have come under constant pressure caused by market and commodity price volatility, political instability, and related disruptions. Highly optimized linear supply chains have little capacity to absorb the heavy shocks and the disruptions arising from these chronic geopolitical, economic, social and environmental crises.

Business and supply chain configurations must inevitably change to perform optimally in the new reality, because linear supply chains are neither designed nor structured to win in the new economy. The new reality is different in kind, obliging business to undergo radical and systemic change.

Therefore, sustainability and circularity are not fads but real trends. Strategically they are the means of winning consistently through increased supply chain resilience and reliability.

Why sustainable and circular supply chains will win

Corporations and investors are usually skeptical about sustainable and circular supply chains because they see them as a complex and expensive undertaking. They hope that one day technology will make a breakthrough, turning that complexity and expense into something simple and straightforward.

But technology alone cannot deliver the transition into the new economy; nor can it solve the profound challenges of the linear model. New business configurations, enhanced control and transparency, and the human factor are vital. Strategic leadership is required; organizations must be properly qualified, empowered and equipped; and, as we have also seen, entire ecosystems must work in concert to find win-win solutions, to develop approaches that are both compliant and commercially forward-thinking, and to embed business-minded sustainability thinking across the lifecycle, from product design to end of life.

Sustainable and circular supply chains are more competitive and resilient in the new economy

Since sustainable and circular supply chains cover entire product lifecycles and their related maintenance, reuse, refurbishing, remanufacturing and recycling circularity loops, they can capture the entire value and the opportunities of the new reality more effectively.

Essentially, sustainable and circular supply chains outperform the linear model in the following ways: [For further information, case studies and examples refer to the Capgemini Insights section]:

	Linear supply chains	Sustainable and circular supply chains
Resource reprioritization and efficiency Energy transition together with essential and critical sectors will have priority on resources, within which price increase trends will continue. Markets and legislations will incentivize resource efficiency through extended product lifecycles and high recovery rates.	• Leverage supply to scale and to minimize production and logistics costs. • Focus on increasing sales to meet new demands, hence energy and resource intensive. • Focus on forward logistics, balancing cost and service trade-offs, and limit reverse flows to product issues. • Lack transparency and control after the point of sale and do not seize recovery flows opportunities, hence assume sold or old season/model products as waste.	• Leverage secondary raw material supply, and product sufficiency and quality to maximize regenerative and resource efficient production and logistics, and high recovery flows. • Cover both forward and reverse logistics flows for new, end-of-use, and end-of-life products, including recovery services and solutions, hence more value. • Extend supply chain control and capabilities beyond the point of sale, to maximize recovery flows of materials, components, parts, and products at their highest value.
Secondary markets and new demands The economic outlook of almost flat global growth and reduced purchasing power of users and consumers will further increase secondary markets and demands, such as "second-hand," refurbishing and remanufacturing products. It is also a fact that there is still a lot of space left in the market for sustainable, circular and durable products.	• Primarily designed to privilege the production and the delivery of new products, aiming at increasing related market needs and demands. • Lack of reverse logistics and recovery capabilities and resistant to secondary markets and demands. For example, elimination of excess or outdated stocks (business waste management).	• Designed to foster secondary markets and demands, hence new revenue streams beyond the point of sale, for example arising from repair and reuse opportunities. • Higher reputation and customer equity driven by higher product quality and extended lifecycles. • Higher profitability in refurbishing and remanufacturing of products, because it is significantly less energy- and resource-intensive than new product manufacturing.
Regionalism The geopolitical crisis is resulting in regionalism, such as the big re-shoring and near-shoring wave from China to North America and Europe. Supply chains are shorter and operate with more proximity, and new industrial and logistics clusters and ecosystems are forming and evolving.	• Primarily designed to leverage labor and infrastructure cost-efficiency through centralized and standardized operations in economically convenient countries and territories. • Limited elasticity and flexibility to maintain efficiency levels from global to regional decentralized operations.	• Best fit in operational proximity, to leverage forward, reverse and recovery flows. • Benefit from local and regional ecosystem collaboration, to leverage downstream recovery capabilities for sustainability and circularity sources of value.

	Linear supply chains	Sustainable and circular supply chains
Supply chain disruptions and re-shaping Crises of various natures are expected to continue increasing in frequency and gravity, resulting in supply chain disruptions. Supply chain re-shaping has started, and integration of these processes and systems could be done in parallel with circularity rather than in series.	• Mainly rely on a stable and commercial supply environment, and perform at highest levels of efficiency and optimization, hence more rigid and less adaptable to absorb shocks and chronic disruptions.	• Rely on supply forward logistics as well as recovery reverse logistics flows, hence less dependent on primary critical raw materials and resources, as well as more resilient and adaptable to market volatility through differentiated channels, products and services.
Ownership vs performance economy As-a-Service business models are expected to increase, not just for sustainability and circularity reasons, but for consumer behaviors (e.g. mobility).	• Usually asset-light, and highly efficient and optimized forward logistics flows, but lack of commercial capabilities, as well as transparency and control beyond the point of sale. • Limited skilled resources to seize the opportunities of as-a-Service business models.	• Forward and reverse logistics, as well as higher transparency and control beyond the point of sale, which enable organizations to leverage assets for as-a-Service business models. • Extended asset control and management significantly increases margin opportunities driven by circularity (improved product quality and performance).
Waste revalorization With increasing priority on critical raw materials and strategic resources, downstream players and providers will be requested to develop and scale capabilities and infrastructure to give waste a new life and to ensure high recovery of materials.	• Defined as take-make-waste since they do not extend the value chain beyond the point of sale, and because they are designed to "sell more." • Neglect reverse and recovery flows, hence more energy and resource intensive as well as more wasteful.	• Designed to eliminate waste and pollution. • Extend to and master reverse and recovery flows, waste elimination focused, and waste-to-resource oriented.
Double materiality and intangibles Already implemented corporate sustainability disclosure and due diligence regulations are directly and significantly related to supply chain operations. Sustainability and circularity incentive and penalty systems will increasingly impact value generation as well as competitiveness.	• Highly focused on the economic dimension. • Environmental and social impact are primarily given compliance consideration, otherwise secondary priority. • Accounting is traditional. • Sustainability and circularity sources of value are minimally considered or even ignored, hence more exposed from the perspective of reputational and environmental liabilities.	• Balanced focus between economic and environmental dimensions. • Enhanced double materiality metrics transparency and control. • Accounting extends into sustainability and circularity, anticipating double materiality. • Designed to reduce or even eliminate environmental impact, hence, will minimize sustainability risks and liabilities. • High reputation from the environmental perspective.

Why turn today's threats into fresh new opportunities for business longevity and prosperity?

Today's corporate leadership is at a turning point. There are real opportunities for growth and cost control by a transition towards sustainable and circular supply chains.

Access to critical raw materials is vital to maintain industrial primacy and competitiveness,

New demands and commercial opportunities are arising in the new economic reality. More resource-efficient, durable products and a regenerative production of food will be privileged in private and public procurement, as well by end-users and consumers. For example, EU Green Public Procurement GPP (including Circular Procurement) represents approximately 15% of the overall EU GDP, impacting dual use public and private product categories.[8]

But even more importantly, the previously described threats and opportunities are building momentum, and as a result societal, political and economic forces are converging. Policy is transitioning for example, a large amount of budget allocated by the EU and US is directed toward more resilient and sustainable industries, re-establishing the role of sustainability and circularity for competitiveness. Legislation and standards are developing at a fast pace to address new requirements, such as for example the ISO 59000 circular economy standards key to drive sustainability and circularity implementations.

Moreover, the Mario Draghi report "The future of European competitiveness" re-centered the strategic importance of sustainability and circularity in value chains, in particular with regard to critical resources.[9] Similarly, they have been given the highest priority in the US economy, for example through the US Inflation Reduction Act (IRA), the Bipartisan Infrastructure Law (BIL), and the Creating Helpful Incentives to Produce Semiconductors and Science Act (CHIPS and Science Act).

Businesses that fail to swiftly adapt to the new economy will be swept aside, creating space for forward-thinking organizations to dominate by working together as ecosystems and as entire industries, driving the sustainability and circularity revolution.[10, 11, 12]

[8] EU Green Public Procurement GPP
[9] EU The future of European competitiveness: Report by Mario Draghi
[10] US Inflation Reduction Act (IRA)
[11] US Bipartisan Infrastructure Law (BIL)
[12] US Creating Helpful Incentives to Produce Semiconductors and Science Act (CHIPS and Science Act)

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About Accirculate Srl

Accirculate is an independent niche consulting firm specialized in Circular Economy & Circular Supply Chains. Our mission, embedded in our name, is to “accelerate cirrcularity” in supply chains.

Accirculate is active on Research & Innovation (e.g. EU Public Funding), Learning & Development, and Consulting. It brings a team of highly experienced professionals, academics, domain experts and certified PM² Methodology trainers (PM² is the European Commission project management methodology).

Our sustainability and circularity driven services help organizations in navigating the complexity of the twin green and digital transitions, and in building sustainable competitive advantage.

www.accirculate.com

About Capgemini

Capgemini is a global business and technology transformation partner, helping organizations to accelerate their dual transition to a digital and sustainable world, while creating tangible impact for enterprises and society. It is a responsible and diverse group of 340,000 team members in more than 50 countries. With its strong over 55-year heritage, Capgemini is trusted by its clients to unlock the value of technology to address the entire breadth of their business needs. It delivers end-to-end services and solutions leveraging strengths from strategy and design to engineering, all fueled by its market leading capabilities in AI, generative AI, cloud and data, combined with its deep industry expertise and partner ecosystem. The Group reported 2024 global revenues of €22.1 billion.

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