



Portfolio Management for Sustainability: 4 Dimensions

Introduction: Portfolio Management in a VUCA world

Portfolio management has long been considered a cornerstone of strategic decision-making. Organizations continuously allocate scarce resources across products, services, projects, markets, and business activities in an attempt to maximize value and achieve strategic objectives. Traditionally, portfolio management focused on balancing risk and return, prioritizing investments, and optimizing organizational performance. However, the context in which organizations operate has changed fundamentally. Climate change, geopolitical instability, technological disruption, biodiversity loss, changing stakeholder expectations, and increasing regulatory complexity have transformed the strategic environment. Rather than operating in relatively stable markets, organizations increasingly face conditions characterized by volatility, uncertainty, complexity, and ambiguity (VUCA).

In such environments, traditional portfolio management faces growing limitations. Approaches designed to optimize performance under stable conditions often struggle when assumptions, technologies, regulations, and stakeholder expectations change rapidly. As a result, contemporary strategy scholars increasingly argue that organizations must complement ‘optimization’ with ‘adaptability’, ‘resilience’, and ‘systemic responsiveness’ (Teece, 2018; Adner, 2021; Folke et al., 2021). Portfolio management remains unambiguously relevant, but its underlying logic requires reconsideration and upgrading. Rather than viewing portfolios primarily as collections of investments to optimize, organizations increasingly need to view portfolios as dynamic configurations of products, relationships, issues, capabilities, and geographic positions that must continuously evolve in response to changing societal and ecological conditions.

This memo presents a selection of the basic literature and arguments in this discourse: it explains what ‘traditional’ portfolio management usually involves (section 1), what limitations have appeared in practice (section 2), and what new components are needed to increase the relevance for sustainability and resilience of portfolio management (section 3). Finally, we elaborate four portfolio dimensions that are particularly important for organizations seeking long-term sustainability and resilience: product and service portfolios, stakeholder portfolios, issue portfolios, and country portfolios (section 4).

1. Traditional portfolio management: the logic of optimization

Traditional portfolio management emerged from strategic planning, finance, and innovation management. Portfolio management in general refers to the systematic management of an organization's collection of investments, products, services, projects, or business activities. The stated goal is to maximize overall value, balance risks, and ensure alignment with strategic objectives (Cooper, Edgett & Kleinschmidt, 2001). Organizations possess limited resources such

as capital, time, knowledge, and talent. Portfolio management provides a framework for deciding how these resources should best be distributed across competing activities. Managers typically evaluate, compare, rank, select, fund, monitor, and, when necessary, terminate activities within the portfolio.

In practice, portfolio management involves decisions such as:

- Discontinuing underperforming products, projects, or services
- Continuing activities that generate satisfactory returns
- Scaling successful initiatives
- Reallocating resources from declining activities to promising opportunities

Mainstream portfolio management seeks to create an optimal mix of activities that balances risk and return. Its primary focus has usually been on:

- Operational efficiency
- Maximizing risk-adjusted returns
- Maintaining a balanced investment portfolio
- Prioritizing the most attractive investment opportunities

Many well-known portfolio frameworks – such as the Boston Consulting Group (BCG) Growth-Share Matrix and various project portfolio management methods – were developed under the assumption that managers can evaluate alternatives objectively and allocate resources accordingly: better information and better analysis lead to better allocation decisions. The dominant portfolio question therefore became: which activities should receive more resources, and which activities should receive less?

This optimization logic has proven highly effective in relatively stable environments. It encourages efficiency, transparency, accountability, and strategic discipline. However, many of its assumptions become problematic when organizations operate in highly dynamic and uncertain environments or aim at systemic transformations. There are clear limits to traditional portfolio management.

2. The limits of traditional portfolio management

■ Structural bias towards the present

Traditional portfolio management practice tends to favour existing business models and proven revenue streams. Activities that already generate measurable returns often receive priority over more uncertain initiatives. Strategy becomes an extension of past success rather than a response to future opportunities (Teece, Pisano & Shuen, 1997). Innovation scholars describe this mechanism as an ‘exploitation bias’ (March, 1991). Existing products, established customers, and familiar technologies typically outperform emerging alternatives in conventional evaluation systems. Consequently, organizations often become locked into trajectories that reflect past success rather than future opportunity. This phenomenon becomes particularly problematic in periods of sustainability transition, where incumbent business models may become increasingly misaligned with societal expectations and regulatory developments (Geels et al., 2023). Incremental improvements are rewarded, while more transformative innovations struggle to obtain resources. As a result, long-term investments in innovation, resilience, capability development, and

sustainability are frequently postponed because their benefits are difficult to quantify in conventional portfolio models.

■ Risk minimization rather than opportunity creation

Traditional portfolio logic is largely designed to avoid losses. Forecast-based planning systems reward predictability and treat uncertainty primarily as a source of risk. Yet many strategic opportunities emerge precisely under conditions of uncertainty. Emerging technologies, new markets, and societal transitions cannot be evaluated solely through historical performance indicators. So-called ‘dynamic capabilities’ research suggests that competitive advantage increasingly depends on an organization's ability to sense emerging opportunities, seize them, and continuously transform its resource base (Teece, 2018). A portfolio focused exclusively on ‘risk reduction’ may therefore systematically underinvest in future competitiveness and resilience. Organizations frequently underinvest in exploratory initiatives, new business models, and strategic capabilities that may become essential in the future (March, 1991). As a result, the portfolio becomes defensive rather than generative.

■ Reactive rather than anticipatory decision-making

Traditional portfolio reviews are often backward-looking. Managers evaluate performance indicators, budget deviations, project outcomes, return on investment and ask whether activities are meeting expectations. Contemporary resilience research, however, emphasizes that organizations must increasingly develop anticipatory capabilities that enable them to identify emerging disruptions before they materialize (Duchek, 2020). The predominant inside-out perspective of traditional portfolio management approaches may overlook emerging changes in technology, regulation, stakeholder expectations, or societal values. As a result, organizations risk becoming highly efficient at responding to yesterday's challenges while remaining poorly prepared for tomorrow's disruptions.

■ The optimization trap

Perhaps the most fundamental limitation of traditional portfolio management concerns optimization itself. Optimization assumes that system boundaries are known, performance criteria remain stable, and future conditions can be approximated from past observations. In reality, however, markets evolve, regulations change, geopolitical tensions emerge, and stakeholder expectations shift. Organizations increasingly operate within complex adaptive systems characterized by non-linearity, feedback loops, and unexpected shocks (Folke et al., 2021). As environments become more turbulent, optimizing current performance can paradoxically reduce future adaptability. This phenomenon has been described as ‘getting better at the wrong game’. Efficiency can create short-term success while simultaneously reducing long-term adaptability. Resilience scholars describe this as efficiency-resilience trade-offs. Excessive efficiency often reduces essential levels of redundancy, diversity, and adaptive capacity – the very qualities needed to withstand disruption.

3. Towards sustainable and resilient portfolio management

Resilience literature defines resilience not as resistance to change but as the capacity to absorb disturbances, adapt, and continue creating value under changing conditions. Rather than optimizing for efficiency alone, organizations must develop the capacity to adapt, learn, and regenerate over

time. Similarly, sustainability transition research argues that long-term organizational viability depends on the ability to participate in broader societal transformations rather than merely respond to them (Schot & Steinmueller, 2018; Geels et al., 2023). Taking these two perspectives into account, implies a different portfolio logic:

Traditional logic	Sustainability and Resilience logic
▪ Efficiency ▪ Optimization ▪ Control ▪ Internal focus ▪ Prediction ▪ Stability ▪ Competition	▪ Adaptability ▪ Regeneration ▪ Continuous alignment ▪ Ecosystem focus ▪ Preparedness ▪ Evolution ▪ Ecosystem orchestration

Sustainability-oriented portfolio management can therefore be defined as: the organizational capability to continuously shape, rebalance, and transform portfolios of activities, investments, products, partnerships, and institutional positions in ways that maintain long-term viability, societal legitimacy, and value-creating over time despite environmental, technological, societal, and business ecosystem change. The purpose of sustainability-oriented portfolio management is not only economic or financial performance. It also seeks to ensure societal legitimacy, resilience against disruptions, strategic flexibility, and alignment with evolving societal expectations (Eccles, Ioannou & Serafeim, 2014).

■ **Dynamic capabilities as foundation**

The concept of ‘dynamic capabilities’ provides an important theoretical foundation for sustainable and resilient portfolio management. According to Teece (2018), organizations require three interrelated capabilities: *sensing* (identifying emerging technological, societal, ecological, and geopolitical developments); *seizing* (mobilizing organization-internal resources to exploit emerging opportunities); and *transforming* (reconfiguring organizational assets and external relationships as circumstances change). Teece’s threefold classification can also be used to delineate essential organizational practices (so-called ‘micro-foundations’) that help organizations overcome the ‘innovation paradox’ (Mousavi et al., 2019). The innovation paradox refers to the phenomenon of why a strategy of pursuing operational excellence and incremental innovation – “adding a feature here, cutting a cost there” (Davila and Epstein, 2014) – unintendedly reduces the likelihood of realizing much-desired breakthrough innovations (see Chapter 11 in Van Tulder & Van Mil 2023: 753). Portfolio management becomes one of the primary mechanisms through which dynamic capabilities can be exercised and through which obvious transition dilemmas need to be tackled. Portfolio management is no longer simply about allocating resources. It becomes the practical expression of organizational adaptation.

■ **From organizations to ecosystems**

An important implication is that the relevant ‘unit of strategy’ increasingly shifts from the individual organization towards the broader network in which it operates. Organizations rarely create value alone. Instead, they operate within interconnected business ecosystems consisting of suppliers, customers, governments, NGOs, knowledge institutions, communities and competitors (Adner, 2017; 2021). The relevant strategic unit therefore becomes increasingly ‘relational’ rather

than ‘organizational’. This requires portfolio managers to think beyond internal assets and consider broader systems of relationships, dependencies, and societal impacts of expanding portfolios of:

- Partnerships
- Collaborative platforms
- Stakeholder relationships
- Institutional arrangements
- Innovation ecosystems

Sustainable portfolio management increasingly depends on the ability to build, coordinate, and continuously evolve networks of actors that pursue shared goals. Consequently, organizations increasingly adopt new strategic roles, including that of:

- Orchestrator: coordinating activities across business ecosystems
- Integrator: connecting actors from different sectors and domains
- Catalyst: initiating and accelerating systemic change

■ Double materiality and societal alignment

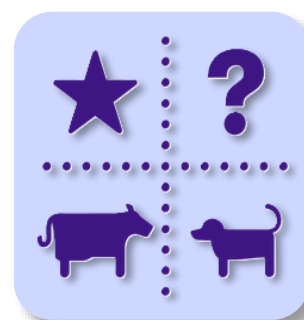
Portfolio decisions must be evaluated not only in terms of economic performance but also in terms of societal impact, stakeholder legitimacy, and long-term sustainability. One of the most significant developments in this regard relates to changes in CSR regimes and the introduction of the concept of ‘double materiality’. Recent regulatory developments – particularly within the European Union’s Corporate Sustainability Reporting Directive (CSRD) – elevated double materiality from a reporting concept to a strategic management instrument that supports long-term sustainability governance (Mezzanotte, 2024). Where ‘traditional’ (single-financial) materiality asks which external developments affect the organization, ‘double’ (impact-societal) materiality adds a second question: how does the organization affect society and the environment? Double materiality creates a continuous inside-out and outside-in alignment challenge. In a dynamic environment, this approach is also known as ‘dynamic materiality’ (see also [Video 1: Strategizing in a VUCA world for Sustainability and Resilience](#)).

4. Four dimensions of sustainable portfolio management

Making conventional portfolio management approaches better ‘fit’ for the forces of an increasingly VUCA world implies that we take a further look at the following four portfolio dimensions: (1) product and service mix portfolios, (2) stakeholder portfolios, (3) issue portfolios, and (4) country portfolios.

4.1 Sustainability-oriented ‘Product and Service Mix Portfolios’

Product and service portfolio management basically refers to the systematic process of evaluating, prioritizing, and managing a firm's portfolio of products and services in order to optimize overall business performance. Traditionally, it has focused on maximizing revenue, profitability, market share, and competitive advantage, while ensuring the efficient allocation of organizational resources across different offerings. By treating products and services as components of an integrated portfolio rather than isolated business units, firms are able to balance risk,



growth opportunities, and strategic objectives (Cooper, Edgett & Kleinschmidt, 2001; Aghajani et al., 2023).

In contrast, **sustainability-oriented product portfolio management** extends *beyond* conventional financial performance metrics by focusing on the dynamic transformation and governance of an organization's entire portfolio of offerings. The objective is to enhance the overall environmental and social performance of products and services while maintaining long-term organizational viability. Rather than optimizing individual products or services in isolation, sustainability-oriented portfolio management seeks to systematically shift the entire product-service mix towards lower-impact and more sustainable alternatives (Bocken et al., 2014; Lüdeke-Freund et al., 2019).

This transition represents a fundamental shift in managerial priorities. Sustainability-focused portfolio management incorporates environmental and social impacts alongside financial outcomes and adopts a long-term lifecycle perspective, considering impacts occurring throughout product development, production, use, and end-of-life stages. Furthermore, portfolio decisions are shaped by evolving regulatory requirements, stakeholder expectations, and broader societal objectives. This necessitates that organizations move away from a product-by-product optimization and instead pursue a system-wide transformation of their entire portfolio (Hart & Milstein, 2003; Schaltegger, Lüdeke-Freund, & Hansen, 2016).

CHALLENGES

Despite its strategic importance, implementing sustainability-oriented portfolio management presents significant challenges. One of the most critical obstacles is the existence of substantial **data gaps** across the value chain. Organizations often lack reliable information regarding environmental and social impacts throughout product lifecycles, including upstream supplier activities, greenhouse gas emissions, resource consumption, and social impacts such as labour conditions and living wages. The difficulty of measuring scope 2 and scope 3 impacts further complicates decision-making and limits the ability of managers to assess the true sustainability performance of their portfolios (United Nations, 2023).

Another challenge concerns the development and application of **consistent performance metrics**. Many organizations continue to rely on traditional key performance indicators (KPIs) that primarily measure financial outcomes. Sustainability-related KPIs are frequently disconnected from existing management systems, which creates inconsistencies and makes trade-offs difficult to evaluate. This misalignment can lead to what some scholars describe as ‘Key Performance Illusions’ (see [here](#)), where improvements in conventional business metrics may actually obscure negative environmental or social impacts (Kaplan & Norton, 1996; Eccles, Ioannou, & Serafeim, 2014).

Trade-offs represent an additional source of complexity. Sustainability initiatives often require significant upfront investments and may reduce short-term profitability, thereby creating tensions between immediate financial performance and long-term value creation. Organizations must also balance investments in established products with investments in emerging sustainable alternatives. This challenge is frequently associated with the so-called ‘incumbent's curse’, referring to the reluctance of established firms to disrupt their profitable existing products, despite evidence that more sustainable alternatives may provide future competitive advantages (Christensen, 1997; Henderson, 2021). Furthermore, decision-makers must navigate trade-offs among multiple sustainability dimensions, including environmental protection, social equity, and economic performance.

The success of portfolio transformation is also heavily influenced by **supply chain and ecosystem dependencies**. Companies rarely possess complete control over the sustainability performance of their products because outcomes depend on a network of suppliers, technology partners, distributors, logistics providers, regulators, and customers. Achieving meaningful sustainability improvements therefore requires collaboration across the broader business ecosystem. Organizations may face limitations in their ability to influence upstream suppliers or secure access to sustainable technologies and materials, which creates barriers to portfolio-wide change (Porter & Kramer, 2011).

Market uncertainty further complicates strategic decision-making. Consumer preferences regarding sustainable products remain difficult to predict, and ‘willingness to pay’ for sustainability attributes often varies across market segments. In business-to-business markets, adoption rates may depend on customer readiness, regulatory developments, and technological maturity. Companies may also fear that introducing sustainable alternatives could cannibalize sales of existing products, leading managers to postpone or limit portfolio transformation efforts despite growing sustainability pressures (Rogers, 2003).

Finally, organizations tend to struggle with the **pace of portfolio transformation**. Sustainability initiatives are frequently implemented through incremental product modifications or ‘green extensions’ rather than through more substantial portfolio redesign. While incremental improvements can generate short-term benefits, they may be insufficient to address systemic sustainability challenges. Moreover, firms risk accusations of greenwashing if sustainability claims are not supported by meaningful changes in products, services and business models. Organizational inertia, capability gaps, and reliance on legacy technologies can further slow transformation – creating what has been described as the ‘Kodak effect’, where firms fail to adapt quickly enough to emerging market and societal expectations (Tripsas & Gavetti, 2000).

4.2 Sustainability-oriented ‘Stakeholder Portfolios’

Stakeholder portfolio management has emerged as a prominent approach for understanding and governing the complex networks of stakeholders and partnerships that surround organizations. Rather than considering stakeholders individually, stakeholder portfolio management emphasizes the systematic identification, mapping, prioritization, orchestration, and governance of an organization's stakeholder ecosystem (external alignment, see [here](#)). This perspective views stakeholders as an interconnected portfolio whose relationships collectively influence the achievement of strategic and operational objectives (Freeman, 1984).



A central characteristic of traditional stakeholder portfolio management is the systematic assessment and mapping of stakeholder relations. Common assessment dimensions include power, influence, dependency, urgency, financial importance, and legitimacy. Through this process, stakeholders are prioritized according to their relative significance, enabling managers to allocate resources and attention more effectively (Bourne, 2016). Traditional stakeholder portfolio management often relies on stakeholder salience frameworks to classify and prioritize stakeholders. One of the most influential models used is the ‘Stakeholder Salience Model’ developed by Mitchell,

Agle, and Wood (1997). According to this model, stakeholder importance is determined by three key attributes: power, legitimacy, and urgency. Power refers to a stakeholder's ability to influence organizational actions and outcomes. Legitimacy concerns the extent to which a stakeholder's claims are perceived as appropriate, desirable, or socially accepted. Urgency reflects the degree to which stakeholder claims require immediate attention because of their time sensitivity or criticality.

While mainstream stakeholder portfolio management provides a structured method for stakeholder analysis, it also presents several challenges. A common criticism is that stakeholders are frequently treated as entities that must be managed, controlled, negotiated with, or mitigated to protect organizational interests. In this view, stakeholder engagement becomes primarily instrumental rather than relational. Organizations often focus on stakeholders as sources of risk, influence, or disruption, emphasizing the need to reduce uncertainty, protect organizational objectives, maintain operational continuity, and manage stakeholder influence. However, such a risk-focused approach may also overlook opportunities for collaboration, co-creation, and long-term relationship building (Donaldson & Preston, 1995).

Furthermore, stakeholder salience is never static. The power, legitimacy, and urgency of stakeholder claims can change over time as market conditions, regulatory environments, societal expectations, and organizational priorities evolve. Accordingly, stakeholder portfolios require continuous monitoring and reassessment. Failure to recognize shifts in stakeholder salience may result in organizations overlooking emerging risks or missing opportunities to strengthen stakeholder relationships (Aaltonen & Kujala, 2010). Contemporary stakeholder management literature increasingly advocates for a more dynamic and collaborative approach that moves beyond prioritization alone. Rather than viewing stakeholders merely as actors to be controlled, organizations are encouraged to develop mutually beneficial relationships that contribute to value creation for both the organization and its stakeholders. This perspective aligns with broader developments in stakeholder theory, which emphasize trust, dialogue, and shared value creation as essential components of sustainable organizational success (Freeman et al., 2010), which becomes particularly relevant when applied to sustainability challenges.

Sustainability-oriented stakeholder portfolio management can be defined as the dynamic identification, prioritization, and strategic orchestration of stakeholder ecosystems to facilitate sustainability transitions. In contrast to traditional stakeholder management approaches – which often focus on protecting existing business models – sustainability-focused portfolio management (also) seeks to mobilize networks of actors capable of contributing to systems change. This requires organizations to recognize that value creation increasingly emerges through collaboration across organizational boundaries rather than through isolated internal capabilities (Roloff, 2008). Success in the longer run depends less on the optimization of internal resources and more on the capacity to build productive relationships with governments, communities, civil society organizations, customers, suppliers, research institutions, and other stakeholders. Organizations that can coordinate diverse stakeholder interests and facilitate collective action are often better positioned to respond to complex sustainability challenges and to identify emerging opportunities for innovation (Dentoni, Bitzer & Pascucci, 2016).

A key concept in this perspective is ‘relational capital’, which refers to the value embedded in relationships among organizations and stakeholders. Relational capital encompasses trust, mutual understanding, shared norms, and collaborative experience accumulated over time. Closely related is the notion of ‘collaborative advantage’, which suggests that organizations can achieve outcomes

collectively that would be impossible to accomplish independently (Vangen & Huxham, 2003). In sustainability transitions, where no single actor possesses sufficient resources or authority to solve systemic problems alone, relational capital and collaborative advantage become critical sources of strategic value. Stakeholder relationships become collaborative and co-evolutionary, emphasizing shared value, mutual adaptation, coordination, and collective learning. Stakeholders are no longer regarded as external actors to manage but as interdependent participants within a broader ecosystem, whose contributions are necessary for achieving sustainability goals (Freeman et al., 2010; Sachs, Rühli & Kern, 2009).

Stakeholder assessment criteria need to evolve accordingly. Instead of focusing primarily on stakeholder power, legitimacy, and urgency, sustainability-oriented approaches emphasize attributes that contribute to system transformation. Organizations increasingly evaluate stakeholders according to their capacity to influence broader societal outcomes, their readiness to participate in sustainability transitions, their willingness to collaborate and share risks, and their alignment with long-term sustainability objectives. Additional considerations include adaptability to changing circumstances and the degree of trust and legitimacy that stakeholders possess within the wider ecosystem. These factors help organizations identify those actors that can contribute constructively to collective sustainability efforts rather than merely influence organizational decisions.

CHALLENGES

Despite its potential benefits, stakeholder portfolio management for sustainability and resilience introduces significant challenges. One prominent challenge concerns the scale and scope of **external alignment**. Organizations are no longer managing discrete projects with clearly defined boundaries but are instead participating in complex networks of interdependent relationships. Achieving alignment among stakeholders with diverse objectives, values, and institutional backgrounds requires substantial investment in communication, negotiation, and relationship building. The quality of these relationships often becomes a decisive factor in determining the success of sustainability initiatives.

Governance complexity presents another challenge. As the number of stakeholders and interactions increases, decision-making processes may become slower and more resource intensive. Diverse stakeholder interests can create goal incongruence, while coordination mechanisms may generate additional administrative costs. Furthermore, organizations risk portfolio fragmentation when stakeholder relationships are managed independently rather than as components of a coherent ecosystem strategy. Such fragmentation can undermine collective action and reduce the effectiveness of sustainability interventions (Provan & Kenis, 2008).

Trust fragility also represents a critical concern. Sustainability transitions frequently depend on long-term collaborative arrangements among multiple actors. Because these relationships are highly interconnected, the failure of a single collaboration can have repercussions across the wider stakeholder ecosystem. Breaches of trust, unmet expectations, or perceived opportunistic behaviour may damage relationships beyond the immediate partnership and weaken the broader network's capacity for cooperation.

A further challenge relates to **dependency risks**. Collaborative sustainability initiatives often require organizations to share resources, knowledge, and decision-making authority with external actors. While such arrangements can enhance innovation and collective problem solving, they may

also reduce strategic autonomy. Dependence on stakeholder commitments creates vulnerabilities if partners withdraw support, change priorities, or fail to fulfil their obligations. Power asymmetries between stakeholders may further complicate collaborative governance and influence the distribution of benefits and responsibilities.

Finally, **measuring stakeholder value** remains a significant methodological challenge. Traditional stakeholder assessment tools often focus on tangible and quantifiable indicators, whereas sustainability transitions generate outcomes that are difficult to measure directly. Concepts such as legitimacy, social capital, ecosystem influence, organizational learning, resilience, and adaptive capacity are inherently complex and multidimensional. Developing reliable methods for assessing these forms of value remains an important area of research within stakeholder and sustainability management literature (Reyepens, Lievens & Blazevic, 2016).

4.3 Sustainability-oriented ‘Issue Portfolios’

To cope with rapidly changing environments, organizations have adopted ‘issue portfolio management’: a systematic process for identifying, prioritizing, monitoring, and governing issues that may affect organizational objectives. Rather than responding to individual issues in isolation, organizations seek to develop an overview of all relevant issues in order to determine which deserve immediate action and which warrant ongoing monitoring. Mainstream approaches to issue portfolio management have helped managers allocate resources and attention across a range of strategic concerns. Within these approaches, issues are typically viewed as potential threats, disruptions, or external pressures that need to be managed. This perspective reflects a traditional risk management approach, whereby managers seek to reduce uncertainty, avoid reputational damage, ensure regulatory compliance, and maintain operational continuity. As a result, issue portfolio management often focuses on protecting organizational performance rather than contributing to broader societal goals.



Traditional issue management builds on the work of Igor Ansoff (1980) who argued that effective (strategic) issue management enables organizations to anticipate environmental changes and respond before they develop into significant threats. Similarly, contemporary risk management frameworks emphasize the importance of identifying and mitigating uncertainties that may affect organizational performance (Hillson, 2009). To support these activities, organizations employ a range of analytical tools. One of the most common is the *risk matrix*, which evaluates issues according to their likelihood of occurring and their potential impact on the organization. Another widely used tool is the *materiality assessment*, which seeks to identify the issues considered most important to both the organization and its stakeholders. Materiality assessments are often visualized through a *materiality matrix* that compares stakeholder concern with organizational importance. In addition, organizations use *heat maps* to rank issues according to factors such as urgency, strategic significance, and reputational sensitivity.

In practice, materiality assessments often reflect an organization-centric logic. Managers typically begin by identifying sustainability issues that may affect business performance and subsequently assess stakeholder concerns regarding those issues. As a result, sustainability topics are frequently

prioritized on the basis of their potential business implications rather than their broader societal significance. This approach has several limitations:

First, it tends to frame sustainability issues primarily as **risks to be managed** rather than opportunities to create societal value. Climate change, biodiversity loss, labour conditions, and human rights concerns receive attention mainly when they threaten profits, reputation, or regulatory compliance. Second, the process may privilege the concerns of **powerful stakeholders**, such as investors, regulators, or major customers, while giving less consideration to groups with limited influence but significant exposure to organizational impacts (as discussed in section 4.2). Third, materiality assessments may create a **bias towards short-term and measurable risks** while overlooking systemic and long-term sustainability challenges.

The conventional materiality matrix illustrates these limitations. By comparing the importance of issues to stakeholders with their importance to the organization, companies often focus on those issues that score highly on both dimensions. This can create a bias towards issues that affect financial performance while underrepresenting environmental and social concerns with longer-term consequences. These challenges reveal a broader limitation of traditional issue portfolio management: its reliance on **single materiality**. Under a single-materiality perspective, sustainability issues are considered material only when they affect organizational performance. Such an approach may neglect the organization's impacts on society and the environment, thereby limiting its contribution to sustainable development.

As sustainability challenges become more complex and interconnected, the limitations of traditional issue portfolio management become increasingly apparent. Climate change, social inequality, resource scarcity, and geopolitical instability cannot be fully understood through a narrow risk-management lens. These issues often involve long-term societal consequences that extend beyond the immediate interests of individual organizations. Therefore, many scholars argue that organizations need to move beyond a defensive and risk-oriented approach and adopt broader perspectives that recognize their role in creating sustainable value for society as a whole.

Sustainability-oriented issue portfolio management refers to the continuous identification, assessment, prioritization, and orchestration of interconnected societal, environmental, technological, economic, and governance issues. Organizations manage a portfolio of issues that collectively influence long-term organizational resilience, legitimacy, adaptability, and societal contribution. This approach recognizes that sustainability challenges rarely occur in isolation. Instead, they interact across systems and generate cascading effects that can reshape markets, stakeholder expectations, and organizational strategies. This shift reflects an outside-in perspective that considers how environmental, social, and societal developments influence organizational success, while simultaneously recognizing the organization's impacts on society and the environment. In short, the emphasis changes from 'single' to 'double' and even 'dynamic' materiality (see [here](#)).

CHALLENGES

Effective (sustainable) issue portfolio management requires organizations to develop several capabilities. First, organizations must continuously scan for so-called '**weak signals**' and emerging trends. Weak signals are early indications of potentially significant future developments that may not yet be visible through traditional performance metrics. Identifying these signals enhances organizational foresight and preparedness. A particular challenge arises from **issue overload**.

Organizations face an unprecedented number of sustainability-related concerns they must address, ranging from climate adaptation and biodiversity protection to human rights, cybersecurity, artificial intelligence governance, and supply chain resilience. The sheer volume of interconnected issues makes prioritization intellectually and strategically demanding.

Second, organizations must **anticipate sustainability transitions**. The transition towards low-carbon economies, circular business models, renewable energy systems, and nature-positive development creates both risks and opportunities. Anticipating these transitions enables organizations to adapt proactively rather than reactively. Yet this requires that **adaptive capacity** is developed throughout the organization. Adaptive capacity refers to the ability to respond effectively to changing conditions, uncertainty, and unexpected disruptions. Sustainability-related challenges often evolve rapidly and involve considerable uncertainty. Accordingly, organizations should cultivate flexibility, learning capabilities, and resilience.

Third, issue portfolio management should inform **business model transformation**. Sustainability challenges increasingly require organizations not merely to improve existing practices, but to redesign their underlying value creation processes. Business models that were successful in the past may become unsustainable in the face of climate regulation, stakeholder demands, resource scarcity, and technological change. The growing overlap between issue portfolio management and other management portfolios affects business model transition processes: sustainability issues increasingly intersect with stakeholder management, sustainability governance, transition management, innovation portfolios, and strategic portfolio management. While this convergence creates opportunities for integration, it also increases managerial complexity. Recent research on sustainability integration in portfolio management therefore highlights the need for holistic frameworks that connect sustainability objectives with strategic decision-making and resource allocation processes.

Fourth, organizations must **identify leverage points** where interventions can generate system-wide impacts. Drawing on systems thinking, leverage points – also referred to as ‘nexus’ – are strategic locations within a system where relatively small actions can produce significant changes. Sustainability challenges often involve complex networks of relationships, making leverage-point identification essential for effective intervention. A particular challenge concerns the unpredictable interactions among issues. Sustainability challenges often classify as ‘**wicked**’ (see [here](#)), characterized by nonlinearity, feedback loops, and emergent effects (van Tulder & van Mil, 2023: Chapter 4). As a result, traditional linear planning approaches frequently fail to capture the complexity of sustainability transitions. Research on sustainability transitions and complex adaptive systems highlights the importance of understanding systemic interactions rather than focusing solely on isolated variables. Such interactions often produce unintended consequences that cannot be predicted through conventional management tools.

Finally, issue portfolio management supports **prioritization based on potential impact rather than short-term urgency alone**. This perspective encourages organizations to focus resources on issues that are most likely to shape future outcomes, even when those issues are uncertain or still emerging. Organizations often underestimate future disruptions because existing assessment methods rely heavily on historical data and established trends. However, sustainability transitions are increasingly shaped by tipping points, rapid technological change, evolving regulations, and shifting stakeholder expectations. Accordingly, organizations must complement traditional assessment techniques with scenario analysis, foresight methods, and systems-based approaches.

4.4 Sustainability-oriented ‘Country Portfolios’

For multinational enterprises (MNEs), sustainability challenges are closely linked to the management of the portfolio of countries in which they operate. International expansion creates opportunities for growth, innovation, and value creation, but it also exposes firms to a wide range of economic, political, social, and environmental risks. Decisions regarding where to produce, invest, source, and sell products shape both a firm's exposure to sustainability challenges and its capacity to contribute to sustainable development.



The international business (IB) literature traditionally views country portfolio management as the process of allocating activities across countries in ways that maximize opportunities while minimizing risks. Firms diversify across countries to reduce volatility, access new markets, acquire resources, improve efficiency, and obtain strategic assets. Mainstream IB studies contend that MNEs pursue combinations of four objectives when selecting locations (Dunning & Lundan, 2002): market-seeking, resource-seeking, efficiency-seeking, and strategic asset-seeking objectives. Conventional country portfolio management then focuses on the optimal spread and geographical distribution of assets, sales, employees, and production activities across countries, combined with choices regarding particular modes of investment and governance. Firms can invest through foreign direct investment (FDI), foreign portfolio investment (FPI), wholly owned subsidiaries, acquisitions, joint ventures, strategic alliances, licensing agreements, franchise arrangements, or sourcing contracts. Together, these instruments determine the structure and scope of an international portfolio.

A central concept in mainstream international portfolio management is **distance**. Differences between home and host countries influence both the costs and benefits of international operations. The widely used CAGE framework (Ghemawat, 2001) distinguishes four dimensions of distance: Cultural, Administrative, Geographical, and Economic distance. These dimensions affect market entry decisions, organizational performance, and the ability of firms to coordinate activities across borders. MNEs continuously adjust their portfolios in response to changing market conditions, political developments, and institutional environments.

Mainstream IB studies generally treat countries primarily as locations for production, sourcing, investment, or market access. Broader social, environmental, and governance dynamics have received much less attention, until recently. A sustainability and long-term resilience perspective broadens the scope of country portfolio management by recognizing that countries differ not only in economic attractiveness, but also in their social, environmental, and institutional conditions. Firms must therefore assess not only strategic market opportunities and operational risks, but also the characteristics of each specific CSR regime in which they operate (van Tulder & van Mil, 2023: Chapter 6 and Chapter 10).

Unlike conventional IB country portfolio approaches, **sustainability-oriented country portfolio management** focuses on maintaining legitimacy and securing a **long-term license to operate** across diverse regulatory and societal contexts. This requires organizations to evaluate how national institutions, stakeholder expectations, sustainability regulations, and development levels influence both risks and opportunities. In practice, many MNEs approach international and local sustainability challenges primarily through risk management, compliance, due diligence, and reporting requirements. Although these activities are essential, they largely reflect an ‘avoid doing

harm' perspective. Such a reactive approach helps firms reduce risks but offers limited guidance in identifying new opportunities for societal value creation. A more *strategic* perspective integrates risk mitigation with the pursuit of opportunities. Frameworks such as the Sustainable Development Goals (SDGs) and ISO 26000 encourage organizations to move beyond mere compliance and make an active contribution to societal development. When incorporated into country portfolio decision-making, these frameworks can support the identification of new markets, strengthen stakeholder relationships, foster innovation, and enhance long-term competitiveness (van Tulder, 2023, available [here](#)).

From a sustainability perspective, the concept of distance becomes even more important. In addition to the traditional CAGE dimensions, firms must continuously manage differences in CSR regimes, stakeholder expectations, and ethical norms across countries. Of particular relevance in this context is the concept of **development distance**: the gap in social, economic, and institutional development between home and host countries. As development distance increases, firms are more likely to encounter ethical dilemmas related to issues such as child labour, living wages, corruption, human rights, and environmental protection. Greater development distance creates more '**moral free space**', increasing the need for explicit corporate responsibility strategies and stronger managerial leadership capable of establishing standards that may exceed local norms and industry practices. In short: leadership that is capable of managing '**normative**' distance. Research in international business ethics suggests that executives of highly internationalized firms are often more aware of these dilemmas because they frequently operate in diverse institutional contexts.

The integration of traditional distance dimensions with sustainability considerations has been conceptualized through a broader **CAGE+ framework**. This framework incorporates hybrid distance dimensions that provide more targeted insights for strategic management decisions, including 'colonial distance', 'political risk and corruption distance', 'development distance', and 'institutional distance'. These dimensions can be synthesized in two ways: (1) as a perceptual measure, and (2) as a strategic approach for aligning characteristics of host and home sustainability regimes. So-called 'psychic distance' then reflects management's overall perception of the combined distance dimensions. For country portfolio strategies, the greatest synergistic value arises from two relational measures: 'stakeholder distance' and 'CSR regime distance' (for further elaboration on the CAGE+ framework, see [here](#)). Both measures emphasize the importance of managing relationships with governments, communities, civil society organizations, employees, suppliers, and other stakeholders across multiple countries in an integrated manner.

CHALLENGES

Implementing sustainability-oriented country portfolio management presents several additional challenges to the first three portfolio dimensions. First, firms must balance economic objectives with **societal expectations** across countries that often have conflicting regulatory systems, cultural norms, and stakeholder demands. Managing consistency while remaining responsive to local conditions is increasingly difficult in a fragmented global environment.

Second, organizations must simultaneously address three categories of **risks and opportunities** (van Tulder, 2018; van Tulder & Roman, 2019):

- **Operational risks and opportunities**, such as currency fluctuations, cultural differences, and logistical challenges.

- **Strategic risks and opportunities**, including political instability, regulatory change, and government intervention.
- **Sustainability risks and opportunities**, which relate to legitimacy, stakeholder relations, social impact, and long-term value creation.

These dimensions frequently interact and therefore cannot be managed separately. Decisions that reduce operational costs, for example, may increase sustainability risks or undermine legitimacy.

Third, firms must continuously assess how the **more qualitative dimensions** of distance affect their ability to operate successfully across countries. Institutional, normative, and stakeholder distance often pose greater challenges than geographical distance because they directly influence organizational legitimacy and corporate responsibility. The internationalization strategy adopted – whether trade-based, multi-domestic, global, regional, or glocal) shapes how MNEs manage CSR and normative distance. An MNE's approach to managing CSR and normative distance may range from aligning with the lowest CSR standards within its country portfolio to adopting the highest standards across all markets. While the former may reduce compliance costs in some locations, it often necessitates significant adaptation in countries with more stringent norms and expectations. The latter facilitates coordination and enhances consistency in corporate responsibility practices across countries on a global scale.

In all cases, sustainability-oriented country portfolio management requires MNEs to move beyond a static conception of internationalization and adopt a **dynamic portfolio perspective guided by materiality considerations**. Country portfolios should be configured not only to maximize current performance but also to strengthen long-term resilience and create long-term value for both business and society. Achieving this objective requires the continuous reassessment and adaptation of portfolio configurations in response to emerging sustainability challenges, evolving stakeholder expectations, and changing regulatory regimes.

5. Conclusion: From optimization to sustainable and resilient portfolio thinking

Traditional portfolio management techniques were developed for a world in which stability was assumed and optimization was the central challenge. Today's strategic environment presents a different reality. Organizations that focus exclusively on optimization risk becoming highly efficient yet strategically fragile. Sustainability- and resilience-seeking portfolio management offers an alternative approach that emphasizes adaptability, ecosystem thinking, societal legitimacy, and long-term societal value creation.

The key question is no longer how to optimize a portfolio under stable conditions, but how to continuously adapt and realign portfolios under changing conditions. Viewed from this perspective, sustainability-oriented portfolio management becomes a core dynamic capability through which organizations maintain competitiveness, resilience, and societal legitimacy. Products, stakeholders, issues, and host countries all become components of broader strategic portfolios that must be continuously reconfigured. This memo elaborated sustainability-oriented portfolio management principles and practices along four routes, each with comparable and overlapping, yet nevertheless distinct qualifications: [1] product-service mixes; [2] stakeholder portfolios; [3] issue portfolios and [4] country portfolios.

- [1] **Sustainability-oriented portfolio management of the product-service mix** is increasingly recognized as one of the most powerful strategic levers available to organizations. It directly connects sustainability objectives with innovation, revenue generation, and societal value creation. However, realizing its potential requires organizations to overcome substantial challenges related to data availability, performance measurement, trade-offs, ecosystem dependencies, market uncertainty, and the pace of portfolio transformation.
- [2] **Sustainability-oriented stakeholder portfolio management** represents a significant evolution from traditional stakeholder management approaches. It shifts attention from managing stakeholder influence towards orchestrating stakeholder ecosystems capable of enabling systemic transformation. This perspective introduces new governance and measurement challenges and offers organizations a framework for addressing the interconnected social, environmental, and economic issues that characterize contemporary sustainability transitions.
- [3] **Sustainability-oriented issue portfolio management** represents an important evolution in sustainability management. Rather than focusing narrowly on individual risks, organizations are increasingly required to manage dynamic portfolios of interconnected sustainability issues that influence long-term resilience, competitiveness, and societal legitimacy. The transition from mainstream risk management towards sustainability-focused issue portfolio management requires systems thinking, adaptive capacity, a long-term orientation, and double materiality perspectives. Although challenges such as issue overload, uncertainty, and systemic complexity remain substantial, organizations that develop these capabilities will be better positioned to navigate sustainability transitions and contribute to broader societal transformation.
- [4] Sustainability and resilience challenges extend traditional country portfolio management beyond considerations of market access, efficiency, and risk diversification. It requires organizations that operate across borders to simultaneously evaluate countries as economic, social, environmental, and institutional systems. Effective **sustainability-oriented country portfolio management** therefore depends on two interrelated capabilities: selecting a portfolio of countries that balances risks and opportunities across different CSR regimes, and managing operational, strategic, and sustainability challenges concurrently. MNEs that master both capabilities are better positioned to achieve long-term competitiveness while contributing to sustainable development.

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