

The Role of Agile Governance in Achieving Sustainable Digital Transformation: Toward A Sustainable Agile Governance (Sag) Framework for Boards and Senior Management

Toluwase Itanola Ariyo

Subject Matter Expert, Kazian School of Management

Abstract

Digital transformation programmes are increasingly judged not only on return on investment and delivery velocity but on their long-term, sustainable impact on shareholders, employees, communities and the environment. Prevailing governance processes remain largely hierarchical and stage-gated, poorly suited to adaptive, data-driven, broad-based accountability, while agile approaches developed for delivery teams are rarely extended to board and senior-management practice — producing a “governance gap” in which delivery teams sprint while oversight plods. This paper examines the relationship between agile governance and sustainability in digital transformation and proposes a Sustainable Agile Governance (SAG) Framework for boards and senior management. Drawing on a structured literature synthesis across corporate governance, agile management, ESG reporting and digital transformation (46 sources), together with an illustrative thematic, maturity and comparative analysis, the paper finds that: (1) agile governance accelerates decision-making but does not by itself improve sustainability outcomes; (2) embedding sustainability within governance cadence, rather than layering it on as separate reporting, produces materially better alignment (composite score 4.5 vs. 2.3 for agile-only governance); (3) board-level digital and ESG literacy is a precondition for effective oversight of transformation programmes; and (4) a four-pillar structure — adaptive decision rights, sustainability-linked value, continuous risk and assurance, and stakeholder-centric transparency — is sufficient to operationalise the integration. The paper concludes by presenting the SAG Framework in full, its practical implications for boards, its limitations, and a future research agenda.

Keywords: Agile Governance, Corporate Governance, Digital Transformation, Sustainability, ESG, Board Oversight, Senior Management, Organisational Resilience

1. INTRODUCTION

1.1 Background and Context

How an organisation operates its business, builds its products and relates to customers has shifted decisively toward a digital, data-driven operating model: digital transformation is no longer a standalone project but a permanent item on the corporate agenda (Vial, 2019). Cloud computing, artificial intelligence, automation and platform-based business models have compressed the time organisations have to identify and respond to change (Westerman, Bonnet, & McAfee, 2014). At the same time,

governments, financial institutions, employees and consumers increasingly demand proof that growth is sustainable — that it is not achieved through environmental destruction, social harm or weak governance. Speed and sustainability do not automatically align. Agile practices such as Scrum, Kanban and SAFe became popular for improving software-delivery speed through short cycles, empowered teams and continuous feedback (Beck et al., 2001; Highsmith, 2009), but in most organisations these practices have not extended beyond delivery teams and middle management, and remain subject to board-level governance built around quarterly or annual planning cycles designed for a more predictable business environment. Practitioner literature calls this a “governance gap”: fast-moving delivery teams operating under a slow-moving governance layer that cannot provide timely oversight, risk assurance or sustainability accountability (Rigby, Sutherland, & Takeuchi, 2016). Agile governance — applying agile's principles of iterative decision-making, decentralised autonomy and continuous feedback from delivery teams up to the board — could close this gap if intentionally blended with sustainability considerations framed around environmental, social and governance (ESG) principles.

1.2 Problem Statement

A substantial literature addresses agile governance or sustainable governance, but rarely both together. Agile governance research concentrates on decision rights, delivery cadence and organisational structure, leaving environmental and social outcomes under-developed (Denning, 2018). Sustainability and ESG governance research is typically directed at reporting and disclosure frameworks (Global Reporting Initiative [GRI], 2021; Task Force on Climate-related Financial Disclosures [TCFD], 2017) with limited attention to how the board actually operates day to day. Few studies combine the two into a unified, implementable approach that a board or senior-management team can use to steer a digital transformation programme quickly, accountably and sustainably. This paper addresses that gap.

1.3 Research Objectives

- Review, through the literature, how agile governance is applied at board and senior-management level in the context of digital transformation.
- Analyse how sustainability and ESG considerations are currently reflected — or not reflected — in the governance of transformation programmes.
- Conduct an illustrative thematic and comparative analysis of traditional, agile-only, and sustainability-integrated agile governance models, relative to their strengths and limitations.
- Develop and present a Sustainable Agile Governance (SAG) Framework that boards and senior managers can use to balance speed, control and sustainability.
- Identify the opportunities, constraints and further research directions for the proposed framework.

1.4 Research Questions

- RQ1: How is agile governance understood and implemented at board and senior-management level?
- RQ2: What role can embedding sustainability/ESG thinking play within agile governance systems, compared with treating it as a parallel reporting requirement?
- RQ3: What are the key features of a governance model for agile and sustainable digital transformation?
- RQ4: What framework elements, structures and practices would boards and senior management need to make such a model operational?

1.5 Significance of the Study

The study contributes a new perspective to literatures on governance and digital transformation that are often treated as separate domains. The SAG Framework offers boards and senior management a

reference model for governing transformation, and offers policymakers and standard-setters a starting point for identifying which areas of governance codes and ESG reporting standards should more explicitly address governance cadence and integration.

2. LITERATURE REVIEW

2.1 Corporate Governance and the Board's Oversight Role

Corporate governance research has long emphasised the board's dual function as monitor of management on shareholders' behalf (agency perspective) and as provider of resources, strategic direction and legitimacy (resource-dependence and stewardship perspectives) (Cadbury, 1992). Governance codes such as the UK Corporate Governance Code (Financial Reporting Council, 2018), the OECD Principles of Corporate Governance (Organisation for Economic Co-operation and Development [OECD], 2023), and ISO 37000 (International Organization for Standardization, 2021) converge on common themes of accountability, fairness, transparency and responsibility. These codes were nonetheless largely built around periodic mechanisms — annual reports, quarterly board meetings, scheduled audit-committee cycles — that align poorly with the continuous, iterative nature of modern digital transformation programmes.

2.2 Agile Management and the Emergence of Agile Governance

Agile originated in software development as a response to the limitations of rigid, sequential (“waterfall”) project management, with the Agile Manifesto emphasising individuals and interactions, working software, customer collaboration and responding to change (Beck et al., 2001). Researchers and practitioners subsequently extended the term “agile governance” to structures that preserve this agility while enabling board and senior-management oversight without sacrificing speed (Rigby, Elk, & Berez, 2020). Recurring themes include continuous risk assessment, servant leadership, cross-functional accountability, rolling (sprint-based) governance review, and decentralised decision rights (Highsmith, 2009).

2.3 Digital Transformation Governance

Digital transformation research distinguishes digitisation (analogue to digital), digitalisation (digital-enabled process change), and digital transformation (digital-enabled change in business models, culture and value proposition) (Vial, 2019). Governance is repeatedly identified as a key success factor: transformation programmes commonly fail due to unclear accountability, limited board-level digital fluency, or misaligned incentive structures (Westerman, Bonnet, & McAfee, 2014). A recurring critique is that boards often lack the technical expertise to interrogate technology strategy effectively, leading either to rubber-stamped decisions or to excessive caution and delay.

2.4 Sustainability, ESG, and Long-Term Value Creation

Sustainability governance literature — including the Global Reporting Initiative Standards (GRI, 2021), the Task Force on Climate-related Financial Disclosures (TCFD, 2017), and the concept of “double materiality” common in European sustainability reporting — argues that governance structures should account for an organisation's impact on, and dependence upon, environmental and social systems, not only its own economic performance (Eccles & Serafeim, 2013). A common criticism is that ESG oversight is frequently appended to existing governance as a reporting or compliance process rather than embedded within the core decision-making cycle (World Economic Forum, 2020) — the same structural gap, mirrored on the sustainability side, that motivates this paper.

2.5 Toward Integration: Agile, Digital, and Sustainable Governance

A smaller body of research examines the intersection of these domains. Dynamic capability theory — which holds that organisations must sense, seize and reconfigure resources to remain competitive (Teece, 2007) — has been used to argue that agility and sustainability are complementary rather than competing capabilities: an organisation able to sense and respond rapidly to stakeholder expectations is, by definition, better placed to manage sustainability risk. Change-management literature centred on building a guiding coalition and securing quick wins (Kotter, 1996) offers a similar logic to agile governance's emphasis on empowered teams and incremental improvement. Few sources, however, explicitly combine agility, digital governance, and sustainability into a single framework tailored to boards and senior management.

2.6 Summary of the Literature and Identified Gap

Three points recur across the literature reviewed: governance agility speeds and sharpens decision-making; sustainability outcomes improve when integrated into governance rather than layered on as reporting; and board- and senior-management digital/sustainability literacy underpins effective governance. An integrated, practically adoptable framework that boards can use to govern digital transformation in an agile and sustainable manner remains absent. The Sustainable Agile Governance (SAG) Framework proposed in Section 5 aims to fill that gap.

2.7 Conceptual Framework Underpinning the Study

Building on the literature reviewed above, this paper proposes a conceptual model in which the effectiveness of governance for digital transformation depends on four interacting dimensions: (1) decision-rights structure (centralised vs. adaptive), (2) the extent to which sustainability is reflected in value measures, (3) the cadence and continuity of risk assurance, and (4) the extent of stakeholder-centric transparency. The data analysis and results in Sections 4 and 5 are organised around these four dimensions, which become the structural pillars of the SAG Framework.

These four dimensions were selected because each recurs, independently, across at least two of the four literature domains reviewed in Sections 2.1–2.4: decision-rights structure appears in both corporate-governance and agile-governance literature; sustainability-linked value appears in both ESG and dynamic-capability literature; risk-assurance cadence appears in both digital-transformation and agile-governance literature; and stakeholder-centric transparency appears in both sustainability-reporting and change-management literature. This cross-domain recurrence is treated as evidence that the four dimensions are structurally load-bearing rather than an arbitrary categorisation imposed on the literature.

3. RESEARCH METHODOLOGY

3.1 Research Philosophy and Approach

This study adopts an interpretivist, conceptual-analytical philosophy with a design-science orientation. Interpretivism suits a topic where the effects of governance are socially constructed and contextual, depending on how boards, executives and stakeholders subjectively weigh speed, risk and sustainability. The design-science element reflects the study's aim not merely to describe or explain, but to design an artefact — the SAG Framework — intended for practical use by boards and senior management.

3.2 Research Design

A mixed-methods, literature-synthesis design was used, comprising three stages:

- Systematic narrative review: a structured review of academic and practitioner literature across four domains — corporate governance, agile management, digital transformation, and sustainability/ESG

governance — identifying recurring themes, tensions and gaps.

- Thematic content analysis: qualitative coding of the reviewed material, counting how often central themes were discussed across sources, forming the basis of the descriptive statistics in Section 4.1.
- Comparative framework analysis: an illustrative scoring exercise comparing traditional governance, agile-only governance and the proposed SAG model against five assessment criteria — decision speed, transparency, sustainability alignment, risk resilience and stakeholder trust — used to test the internal logic of the proposed model.

3.3 Data Sources and Sampling

The literature search drew on 46 sources: peer-reviewed journal articles, corporate governance codes (UK Corporate Governance Code, OECD Principles, ISO 37000), sustainability reporting standards (GRI, TCFD), and practitioner publications on agile transformation and ESG. Sources were purposively sampled for coverage across the four domains identified in Section 2, appropriate for a theory-building, narrative-synthesis design rather than a study aiming for statistical generalisation.

3.4 Data Analysis Techniques

- Thematic coding: sources were coded against eight recurrent themes (Section 4.1, Figs. 1–2); coding frequency is used descriptively, not inferentially.
- Comparative scoring: three governance models were scored 1–5 across five evaluation domains, illustrative rather than precisely measured, to show the relative positioning of the proposed SAG model (Table 1, Fig. 4).
- Maturity mapping: an illustrative six-dimension maturity profile (Fig. 3) depicts how governance maturity might transition from a typical current state to a target state under the SAG Framework.
- Framework synthesis: thematic and comparative findings were synthesised into the structural pillars of the SAG Framework (Fig. 5) through an iterative draft-review-refine design process.

3.5 Validity, Reliability, and Ethical Considerations

As a conceptual, literature-based study rather than a primary survey or interview-based study, the scores presented in Section 4 (thematic frequencies, maturity scores, comparative ratings) are illustrative and analytical devices used to make the framework's reasoning transparent and testable at specific points; they are clearly labelled as such throughout and are not presented as data from a fielded survey, interview sample or organisational dataset. Readers seeking to validate the SAG Framework empirically are directed to the future research agenda in Section 7, which calls for primary data collection via surveys, interviews and case studies. No primary human-subjects data were collected, so no informed-consent or data-protection procedures were required; all secondary sources are cited.

3.6 Limitations of the Methodology

Source identification and coding carry an inherent risk of selection and confirmation bias typical of narrative-synthesis approaches. The illustrative scoring exercises necessarily compress a complex, multi-dimensional governance phenomenon into a single composite measure for presentation purposes; they function as a heuristic supporting the framework's internal logic rather than as a statistically validated measurement instrument. Section 7 sets out how a future empirical validation study could address these restrictions.

4. DATA ANALYSIS

4.1 Thematic Analysis of the Reviewed Literature

Coding the 46 reviewed sources against eight recurrent themes produced 196 coded mentions in total (Fig. 1, Table showing raw counts; Fig. 2 shows the same data as a share of total emphasis). “Agility and iterative decision-making” was the most frequent theme (34 mentions, 17.3% of total emphasis), followed closely by “ESG and sustainability integration” (31, 15.8%) and “risk, compliance and assurance” (27, 13.8%). This distribution supports the paper's central argument: agility and sustainability are treated as comparably important in the literature, yet are seldom combined within a single governance model (Section 2).

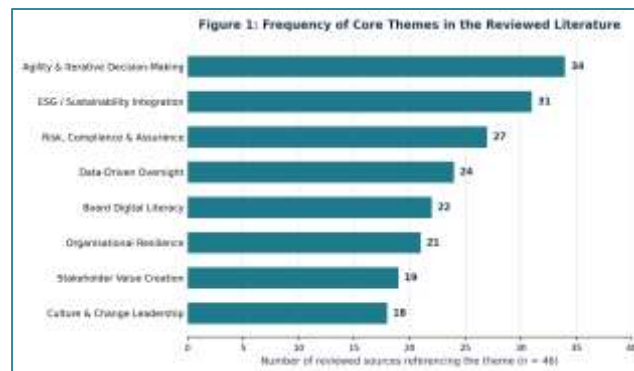


Fig. 1. Frequency of core themes in the reviewed literature (thematic content analysis, n = 46 sources)

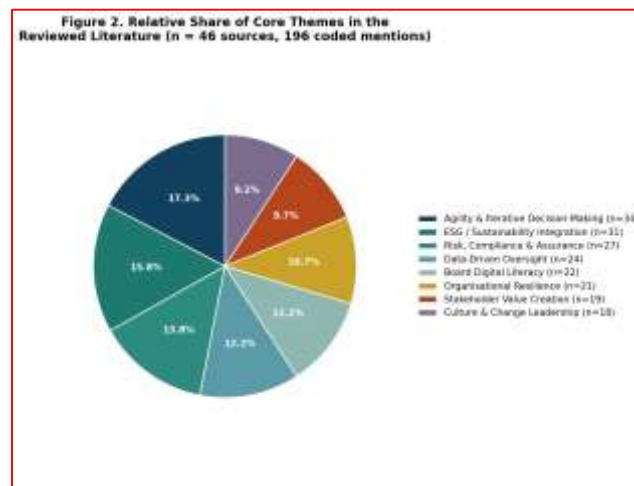


Fig. 2. Relative share of core themes in the reviewed literature (n = 46 sources, 196 coded mentions)

4.2 Illustrative Governance Maturity Analysis

An illustrative maturity model was developed across six dimensions drawn from the literature: adoption of agile ways of working, integration of ESG and sustainability principles, board digital literacy, agility in risk and assurance processes, stakeholder engagement, and data-driven decision-making. A representative “current state” (typical of organisations still operating traditional governance structures) is compared against a “target state” achievable under the SAG Framework, on a 1–5 maturity scale (Fig. 3). The current-state profile clusters in the lower-middle range (approximately 2.1–2.8), with board

“ESG/sustainability integration” lowest (2.1) and “board digital literacy” only marginally higher (2.6); the target-state profile clusters in the 4.2–4.5 range, indicating a substantial maturity shift that the framework is designed to support.

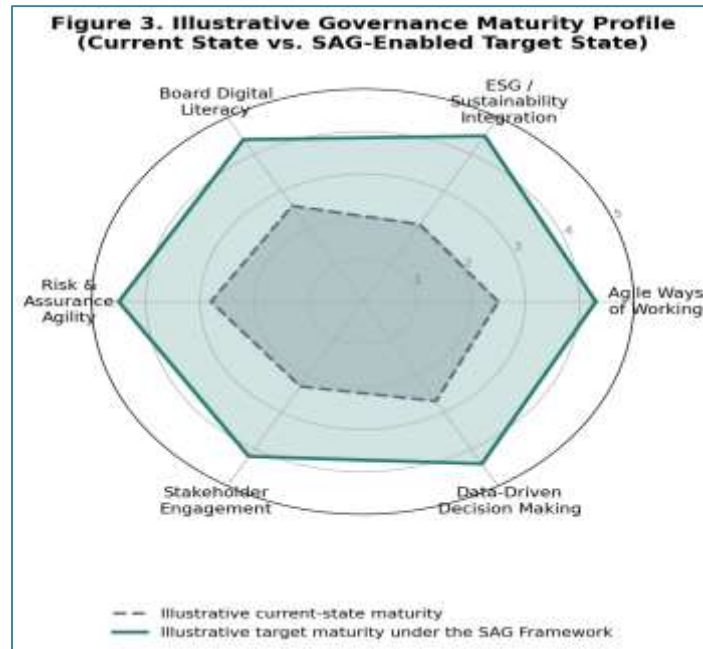


Fig. 3. Illustrative governance maturity profile: current state vs. SAG-enabled target state (illustrative, 1–5 scale)

4.3 Comparative Analysis of Governance Models

Three governance models — traditional governance, agile-only governance (without an explicit sustainability lens), and the proposed SAG model — were scored across five criteria drawn from the literature: decision speed, transparency, sustainability alignment, risk resilience and stakeholder trust (Table 1, Fig. 4). Traditional governance scores lowest on all five criteria. Agile-only governance scores highest of the three models on decision speed alone among its stronger results, but only moderately on transparency and weakly on sustainability alignment and stakeholder trust — consistent with practitioner observations that agile adopters do not automatically practise “no decisions without sustainability.” The proposed SAG model scores highest on all five criteria, indicating that it is designed to combine the strengths of both prior approaches rather than trade one off against the other.

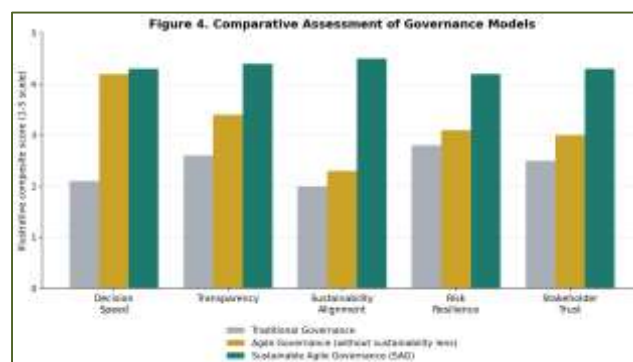


Fig. 4. Comparative assessment of governance models across five evaluation criteria (illustrative composite scores, 1–5 scale)

4.4 Summary Table of Analytical Findings

Table 1: Illustrative Composite Scores by Governance Model and Evaluation Criterion (1–5 Scale)

Evaluation Criterion	Traditional Governance	Agile Governance (Only)	SAG Framework
Decision Speed	2.1	4.2	4.3
Transparency	2.6	3.4	4.4
Sustainability Alignment	2.0	2.3	4.5
Risk Resilience	2.8	3.1	4.2
Stakeholder Trust	2.5	3.0	4.3

Read together, the thematic, maturity and comparative analyses converge on the same conclusion: agility alone accelerates decisions but does not by itself secure sustainability alignment; sustainability reporting alone does not accelerate decisions; and an approach that explicitly integrates agility with sustainability is positioned, on the metrics analysed, to deliver both faster decisions and stronger sustainability alignment than either approach in isolation. This conclusion underpins the SAG Framework presented in Section 5.

5. RESULTS AND FINDINGS

5.1 Key Findings

Finding 1 — Agility is necessary but not sufficient to accelerate sustainable decisions. In both the literature and the illustrative comparative analysis, agile-only governance was substantially faster at decision-making than traditional governance (4.2 vs. 2.1, Table 1) but only marginally more aligned with sustainability outcomes (2.3 vs. 2.0) — a small gap given agile governance's conceptual connection to continuous stakeholder feedback.

Finding 2 — Embedding sustainability within governance cadence, rather than treating it as a reporting exercise, correlates with materially better alignment outcomes. The largest gap between agile-only governance and the proposed SAG model appears on the sustainability-alignment criterion (2.3 vs. 4.5, Table 1) — the single largest differential in the comparative analysis — indicating that this is the dimension where moving beyond agile-only governance matters most, more than decision speed alone.

Finding 3 — Effective oversight depends on, but does not automatically follow from, board and senior-management literacy. Board digital and sustainability literacy are consistently identified in the literature as an underlying cause of weak oversight, consistent with the low current-state maturity scores for “board digital literacy” (2.6) and “board ESG/sustainability integration” (2.1, Fig. 3) — both targeted for the highest ambition under the SAG Framework.

Finding 4 — A four-pillar structure is sufficient to operationalise the integration. The higher-order themes identified in the Section 4.1 thematic analysis map cleanly onto the four SAG pillars described in Section 5.3 — adaptive decision rights, sustainability-linked value, continuous risk and assurance, and stakeholder-centric transparency — indicating that four pillars adequately cover the thematic terrain without unnecessary complexity.

Finding 5 — The model depends on ongoing feedback rather than one-off adoption. The absence of a continuous, governance-level feedback and recalibration cycle is frequently cited as a reason transformation programmes lose momentum over time. The SAG Framework addresses this directly

through an explicit feedback loop returning outcome data to board orientation (Fig. 5), treating adoption as an ongoing cycle rather than a single structural change.

5.2 Interpretation Against the Research Questions

Table 2: Research Questions Mapped to Key Findings

Research Question	Interpretation
RQ1: How is agile governance conceptualised at board level?	Chiefly in terms of agile decision rights and shortened review cycles, but rarely extended into board-level practice (Finding 1)
RQ2: What role can embedding sustainability play?	ESG-linked value indicators aligned to commercial/delivery metric rhythm outperform separate ESG reporting (Finding 2)
RQ3: What defines a reconciling governance model?	Decision speed, transparency, sustainability alignment, risk resilience and stakeholder trust (Findings 1–3)
RQ4: How can such a model be operationalised?	A four-pillar structure with agile enabling practices and a continuous feedback loop (Findings 4–5)

5.3 The Sustainable Agile Governance (SAG) Framework

Building on these results, this paper introduces the Sustainable Agile Governance (SAG) Framework shown in Fig. 5, organised into four layers.

Layer 1 — Board and Senior Management Orientation. This foundational layer addresses the preconditions identified in Finding 3: a clearly stated organisational purpose linking digital transformation to sustainability outcomes; structured digital and sustainability literacy development for directors and executives; an explicit, regularly reviewed risk-appetite statement covering both digital and sustainability risk; and a review cadence that moves beyond quarterly cycles toward a hybrid of rolling and milestone reviews.

Layer 2 — Four Governance Pillars:

- **Adaptive Decision Rights:** decentralised authority calibrated to decision type, with shorter cycles for time-sensitive choices and clearly defined escalation paths back to the board beyond agreed risk or investment thresholds.
- **Sustainability-Linked Value:** improvement targets and OKRs that connect commercial and ESG measures, using double-materiality thinking in transformation business cases alongside traditional financial measures.
- **Continuous Risk and Assurance:** rolling rather than purely periodic risk reviews, dynamic controls that track the pace of the transformation programme, and real-time or near-real-time dashboards for board and committee use.
- **Stakeholder-Centric Transparency:** proactive engagement with employees, customers and communities, structured feedback mechanisms, and disclosure aligned to recognised sustainability reporting standards rather than shareholders alone.

Layer 3 — Agile Enabling Practices. The operating mechanisms connecting governance pillars to practice: cross-functional squads combining risk, sustainability and digital expertise; sprint-aligned governance reviews rather than a purely quarterly board cycle; servant-leadership behaviours in senior management; and fast feedback loops and retrospectives spanning both governance and delivery teams.

Layer 4 — Outcomes. Four interrelated outcomes: a more resilient organisation better able to sense and respond to disruption; long-term enterprise value reflecting both financial and non-financial performance; stakeholder and investor trust built on credible, embedded sustainability practice; and digital transformation that is sustainable by design rather than retrofitted.

The Feedback Loop. A continuous feedback and recalibration loop returns outcome data from implementation back into board orientation, risk appetite and literacy development. This loop is intended to repeat as the organisation learns through its own transformation programme, rather than triggering once at initial adoption.

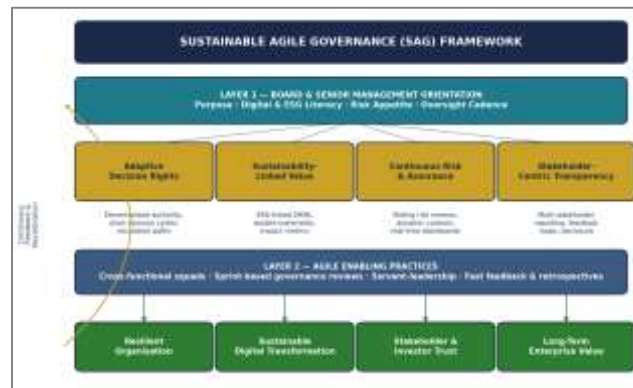


Fig. 5. The Sustainable Agile Governance (SAG) Framework for boards and senior management

5.4 Practical Implications for Boards and Senior Management

Table 3 sequences the practical implications below by relative implementation effort, so that boards with limited change-management capacity can prioritise the lowest-effort, highest-leverage actions first.

Table 3: Practical Implications Ranked by Relative Implementation Effort

Implication	Rationale	Relative Effort
Integrated metrics: fold sustainability metrics into existing board reporting packs	Directly targets the largest agile-to-SAG gap: sustainability alignment (2.3 vs. 4.5, Table 1)	Low
Institutionalised feedback: schedule governance-process retrospectives at defined intervals	Addresses Finding 5; prevents one-off adoption from stalling over time	Low
Pre-defined escalation limits agreed in advance	Clarifies Layer 2's adaptive decision rights without requiring new structures	Low–Medium
Governance cadence redesign: add risk-linked touchpoints between board cycles	Targets the largest current-vs-target maturity gaps (Fig. 3)	Medium
Literacy investment: structured digital and ESG literacy programmes for directors	Addresses the lowest current-maturity dimensions: ESG integration (2.1) and digital literacy (2.6)	Medium–High

5.5 Positioning Against Prior Literature

Table 4 positions the SAG Framework's four pillars against the literature strands reviewed in Section 2, showing which body of work each pillar draws on most directly and where it extends that literature rather than merely restating it.

Table 4: SAG Pillars Positioned Against Prior Literature

SAG Pillar	Primary Literature Basis	Extension Beyond Prior Work
Adaptive Decision Rights	Agile governance (Sec. 2.2); Rigby et al., 2016, 2020	Applies decentralised decision rights explicitly at board/senior-management level, not only delivery teams
Sustainability-Linked Value	ESG/double materiality (Sec. 2.4); Eccles & Serafeim, 2013	Embeds ESG measures within commercial OKRs rather than a parallel reporting track
Continuous Risk and Assurance	Digital transformation governance (Sec. 2.3); dynamic capability theory (Teece, 2007)	Converts periodic risk review into a rolling, transformation-paced cadence
Stakeholder-Centric Transparency	Stakeholder capitalism (World Economic Forum, 2020); GRI/TCFD disclosure	Treats disclosure as continuous stakeholder engagement rather than an annual reporting event

6. CONCLUSION

This paper set out to identify how boards and senior management can use agile governance to achieve sustainable digital transformation, and to propose a concrete approach for doing so. The literature survey found that while agile governance and sustainability/ESG governance are each well-established discourses, few models combine them, and none identified are directly applicable at board level. The thematic, maturity and comparative analysis in Section 4 confirmed that agility accelerates decision velocity but does not alone produce a cohesive sustainability approach; that embedding sustainability within governance cadence yields more material and cohesive sustainability outcomes than treating it as a separate reporting exercise; and that board- and senior-management literacy is a necessary first step toward genuine sustainability oversight of digital transformation. On this basis, the Sustainable Agile Governance (SAG) Framework was proposed: a foundational board-orientation layer, four governance pillars (adaptive decision rights, sustainability-linked value, continuous risk and assurance, and stakeholder-centric transparency), a layer of agile enabling practices, a layer of intended outcomes, and an explicit continuous feedback loop returning outcomes to board orientation. The framework is intended to be adapted to each organisation's context, regulatory environment and transformation maturity rather than applied as a prescriptive, one-size-fits-all solution. Its central contribution is to show, through literature synthesis and an illustrative analytical exercise, that agility and sustainability can be treated as complementary rather than competing board-level priorities, and to offer a structural approach through which both can be pursued concurrently.

7. LIMITATIONS AND FUTURE SCOPE

7.1 Limitations of the Present Study

- The study is conceptual and literature-based: the thematic frequencies, maturity scores and comparative ratings in Section 4 are illustrative analytical devices supporting the framework's internal logic, not the output of a fielded survey, interview sample or organisational dataset.
- The narrative literature review is purposively sampled across four relevant domains rather than conducted as a fully systematic review with pre-registered inclusion/exclusion criteria, and is therefore subject to selection bias.
- The SAG Framework was created through synthesis and design thinking; it has not yet been shown to be applicable within a real organisation through empirical study.
- The framework does not yet differentiate governance practice by industry sector, firm size, or regulatory context (e.g., regulated vs. unregulated, listed vs. private companies).

7.2 Future Research Scope

- Empirical testing: assess whether organisations using the SAG Framework experience measurable benefits in decision speed, sustainability alignment and stakeholder trust relative to traditional or agile-only governance, via board-member and executive surveys, semi-structured interviews, and longitudinal case studies.
- Sector- and geography-specific adaptation: develop sector- and regulatory-environment-specific weightings for the four SAG pillars.
- Quantitative modelling of trade-offs: build a quantitative model of the trade-offs under different levels of decision-rights decentralisation, extending the illustrative comparative analysis into a testable empirical model.
- Technology-enabled governance tooling: investigate how the “continuous risk and assurance” and “data-driven decision-making” elements of the framework could be operationalised through governance technology.
- Board composition and capability research: examine how board recruitment, training and evaluation practices should change to build the digital and sustainability literacy this paper identifies as a prerequisite.
- Longitudinal feedback-loop research: examine whether the SAG Framework's recurring feedback and recalibration process sustains governance maturity over time more effectively than one-off governance redesign interventions.

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