The AI Revolution in the Boardroom

From Oversight Function to Strategic Co-Pilot: The Fundamental Transformation of Board Governance through Artificial Intelligence.

A discussion paper for Boards (particularly non-executive boards, supervisory boards) on redefining corporate governance in the age of artificial intelligence

1. Artificial Intelligence is Not Merely a New Technology. It's a Structural Shift in the Logic of Governance.

Artificial Intelligence (AI) is reshaping the DNA of value creation across a wide range of domains. As data, AI models, and digital platforms become core strategic assets, the focus of strategic oversight shifts accordingly. Boards increasingly need to assess issues such as data ownership, control over AI-enabled processes, and strategic dependencies arising from AI make-or-buy decisions. These choices have direct implications for liability and long-term competitiveness.

As Functional Silos Dissolve, New Structural Challenges Emerge

AI is not a topic that can be isolated within the IT department. It permeates all functional areas, from human resources and sales to production, risk management, and compliance. AI cuts across functional boundaries, creating risks and dependencies that are often invisible within traditional reporting structures. Board oversight must surface cross-functional impacts, including strategic alignment of AI initiatives and concentration risks arising from shared data, models, or external infrastructure providers.

Decision and Governance Cycles Are Shrinking Rapidly

The pace at which AI models evolve, market dynamics shift, and new regulatory requirements (such as the EU AI Act) emerge is unprecedented. Board governance cycles increasingly need to adapt accordingly. Treating AI as an annual agenda item during a strategy offsite is no longer sufficient. What is required is continuous oversight of AI-related risks, investment progress, and the actual business impact of deployed technologies.

The Business Judgment Rule is Being Reinterpreted in the Age of AI

Advancing digitization — particularly the rise of AI — is materially changing the foundations of corporate decision-making. While the Business Judgment Rule (BJR) provides protection from personal liability for executives if they act based on “adequate information", the question increasingly arises as to whether AI will change this standard in the future. At the heart of this is a question that has not yet been clarified but is highly relevant: Can or must the use of AI become mandatory in order to meet the requirement of "adequate" or, according to case law, "comprehensive" information?

2. The Traditional Model of Supervisory Board’s Periodic, Retrospective Control is no Longer Sufficient.

The traditional architecture of corporate governance, characterized by a strict separation between strategic leadership and supervisory control, is facing its most structural challenge since the emergence of modern corporate law. In an era in which data volumes grow exponentially and market cycles compress dramatically, the classic model of periodic monitoring — where supervisory boards review backward-looking reports quarterly — has become an increasingly insufficient governance model that jeopardizes the future viability of companies.

Decision Cycles are Accelerating

While executive management teams increasingly operate with AI-driven dashboards, real-time simulations, and predictive forecasts, supervisory boards are under pressure to make well-founded decisions in a fraction of the time previously required. Supervisory boards face tighter decision cycles across strategy, risk, and performance. This places greater demands on how boards exercise judgment under time constraints, while maintaining fiduciary responsibility and effective challenge.

Reducing Information Asymmetries is Reshaping Board Decision-Making

AI reduces the traditional informational advantage of executive management, as supervisory bodies are now able to conduct their own independent analyses based on raw data rather than relying exclusively on filtered management reports. The reduction of information asymmetries raises new oversight requirements around data quality, model assumptions, and the integrity of management reporting. Supervisory boards increasingly need to govern these information flows to support accountable decision-making.

AI is Creating New Governance, Liability, and Compliance Risks

Failures related to the deployment, oversight, or regulatory compliance of AI systems can result in significant financial, legal, and reputational consequences. The legal landscape for board members has changed dramatically with the introduction of the EU AI Act. The Act establishes a strict, risk-based control regime, imposing extensive requirements on risk management, documentation, and human oversight, particularly for high-risk AI systems.

These developments point toward a clear conclusion: Supervisory boardroom work isexpected to undergo a visible and profound transformation in its structure, composition, required skill sets, and internal processes. This article analyzes that transformation with a clear focus on the European legal environment, in particular the EU AI Act and the specific German legal framework governing the relationship between executive boards and supervisory boards.

3. The Use of AI is Reshaping the Standard of what Constitutes an Adequate Information Standard under the Business Judgment Rule.

Across Europe, the Business Judgment Rule Shields Executives from Liability for Informed, Good-faith Decisions

The Business Judgment Rule is expressly regulated by law in various European jurisdictions (e.g. Austria, Germany, Spain). In some other European countries (e.g. France, Italy, UK), case law applies the principles of the BJR. Accordingly, there is no breach of duty if managing directors can reasonably assume that they are acting in the best interests of the company based on adequate information when making a business decision. Even if the company suffers damage as a result of a decision, executives can exculpate themselves by invoking the BJR and avoid personal liability if they have fulfilled the aforementioned requirements of the BJR in the individual case. The BJR therefore has a dual function: on the one hand, it limits the liability risk of executives in business decisions, which always carry the risk of failure. On the other hand, the BJR ensures rational decision-making processes.

AI Expands Available Data, Raising the “Adequate Information” Standard under the Business Judgment Rule

Of central importance for the BJR is the criterion of "adequate information". To this end, courts have specified the requirements for the information base over the years and tended to expand them: managing directors are increasingly expected to consider all reasonably available sources of information in line with a"comprehensive information" standard. This effectively shifts the standard from "adequate" to an information base that is as complete as possible depending on the situation – the question in any given case is: what constitutes the fullest reasonably available information base?

This question takes on a new dimension in view of the progressive importance of AI in corporate practice. This is because AI systems enable the analysis of large amounts of data and the derivation of insights, forecasts and pattern recognition as well as risk identification in real time. In this way, AI significantly expands the quantity and quality of available information, which not only shifts the information situation, but also the standard of what is considered "adequate" with regard to the BJR.

AI Will Likely Become a Required Tool in Decision-Making, Increasing Executives’ Information and Documentation Duties

So far, there is no legal regulation and no known court ruling according to which executives are obliged to use AI for business decisions. Even in the legal literature, there are currently only a few articles on this topic. This is likely to change in the near future. If more and more companies become distressed or insolvent due to the current economic environment, supervisory boards, insolvency administrators and courts will also deal more intensively with poor management decisions due to insufficient information. In addition, the ever-improving Large Language Models (LLM) mean that even the most complex issues are analyzed by AI in a short time and used for management decisions.

Whether the basis of information is adequate is determined "by the nature and significance of the decision, by the amount of time available to obtain information and by recognised standards of business conduct". In this respect, a balancing must take place between the costs of obtaining information and the benefit of the information. Against this backdrop, and in light of the now good quality of LLM results and relatively low costs of AI research, courts may increasingly expect executives to explain why AI-supported analysis was not considered where appropriate. In the U.S., legal scholarship already refers to a "heightened information duty". In the future, it will no longer be a question of whether,

but of how AI is used. Executives should document whether and how AI was used in the decision-making process, including the resulting outputs. The burden of proof rests on the executives, not the company.

AI Use under the BJR Requires both its Application and Careful Validation of its Results

In addition to proving that AI was used at all, another aspect takes on an important legal significance: that the AI results have been subjected to critical scrutiny and that the sources provided by it have been validated. In addition to the time and financial expenditure required to obtain information, the value derived from the information must also be taken into account. In view of the known hallucination risks and the potential for errors of AI, it could be considered negligent to accept the AI results without any verification. The required level of validation will depend on the specific circumstances of the individual case: whether the sources used by the AI actually exist and appear reliable, whether the facts and figures presented by the AI are consistent with the values mentioned in the source and whether they appear plausible. The validation of the sources should also be documented in writing in order to be able to prove this in the event of a dispute.

In summary, it can be said that executives should use AI to obtain "adequate information" in the sense of the BJR and must also validate the insights gained from it. Compared with traditional approaches, AI significantly increases the speed of information gathering, but the effort required to validate AI-generated outputs also grows. This is required by the general duty of care and should contribute to an "informed decision" within the meaning of the BJR.

4. The Role of Supervisory Boards is Evolving from Oversight Body to Strategic Co-Pilot.

The introduction of AI is forcing supervisory boards to reinterpret and sharpen their role. Boards are responsible for challenging strategic direction and risk boundaries for AI use, including defining the organisation's AI appetite: the role AI should play in the business model and the level of risk the organisation is prepared to accept.

Particularly critical is the determination of acceptable risk levels. Boards increasingly need to determine the appropriate level of autonomy granted to AI systems, especially at sensitive interfaces such as customer interaction, pricing, or automated HR decisions. This goes far beyond technical considerations and requires the establishment of principles for responsible and trustworthy AI, including transparency, fairness, privacy, and security.

AI Will Become a Permanent Element of Board Decision-Making

The technological revolution does not stop at the boardroom door. AI tools are increasingly being used within board work itself to enhance decision quality. Modern board portals enable the automated summarisation of extensive reports, complex scenario simulations, and trend identification across massive data sets.

Risk dashboards that continuously scan internal and external data sources enable early detection of anomalies. Simulations of market, pricing, or demand scenarios allow for a far more robust assessment of strategic options than traditional static planning approaches. Board oversight should therefore extend to understanding the assumptions, limitations, and assurance mechanisms behind these tools.

The new requirements demand a radical realignment of board composition. Technological competence can no longer be reduced to symbolic representation by a single board member. It must become a cross-cutting capability of the entire board.

Supervisory Boards Need AI Literacy and Targeted Upskilling to Close Significant Competence Gaps

Comprehensive AI literacy is required at all levels. This does not imply that every board member must be a data scientist, but a foundational understanding of machine learning, training data, bias, and explainability is essential to ask the right critical questions regarding use cases and business cases. In addition to technical capabilities, soft skills in ethics, organizational development, and change management gain importance, enabling boards to understand and steer the societal and cultural impact of AI transformation.

According to a Kienbaum study ("Why Should Supervisory Boards Engage with AI?", July 2024), there is significant catch-up demand: only 26% of surveyed supervisory board members consider their AI competence sufficient. Executive boards rate their supervisors even more critically, with only 3% agreement. This gap must be closed through targeted training, revised qualification matrices, and the appointment of members with deep digital expertise.

AI fundamentally reshapes the allocation of responsibilities between executive board and the supervisory board.

The Role of Supervisory Boards is Shifting Toward a More Active, Co-Governing Function

The executive board is responsible for the design and execution of the AI strategy, including objectives, resource allocation, accountability, and internal control structures. It must ensure that the supervisory board receives transparent, decision-relevant reporting on progress, risks, and material deviations.

The supervisory board is responsible for overseeing how AI strategy, risk, and investment decisions are governed. This includes challenging major AI-related investments, acquisitions, and dependencies, and ensuring that appropriate governance, assurance, and escalation mechanisms are in place.

5. Embedding AI Governance into Board Structures Is Obligatory for Sustainable Companies.

While an increasing number of boards agree that they need to reinterpret and sharpen their role urgently, there is intense debate about how AI can be most effectively governed from a board's perspective. The pressure to act has intensified as the European regulatory landscape, led by the EU AI Act and sector-specific frameworks such as DORA, is accelerating the need for structured, transparent, and accountable AI governance at the highest levels of corporate oversight.

The approaches currently implemented by leading European organizations vary in terms of complexity and resource intensity. This not only reflects individual differences but also offers a range of options to calibrate governance response to AI maturity, risk exposure, regulatory demands, and strategic ambition.

Endorse AI Principles and Policies in Boards

Several organizations have formalized their commitment to AI through board-approved principles. Allianz SE, for example, introduced a comprehensive framework of eight overarching AI principles, including transparency, human oversight, and non-discrimination. Another example is E.ON SE's declaration on responsible AI use, closely aligned with the EU AI Act and developed in collaboration with employee representatives. Such policies serve as a solid governance anchor, setting both clear expectations and boundaries for AI deployment.

Establish AI as a Standing Agenda Item

Another readily accessible entry point is to institutionalize AI as a recurring topic in board meetings and many organizations have already adopted this approach. Novo Nordisk exemplifies this approach, having included regular reviews of their strategy for AI in R&D as a formal topic in its 2025 Board of Directors' sessions. This approach ensures that AI remains visible at the strategic level and allows boards to monitor developments, risks, and opportunities without requiring structural changes.

Delegate to AI Leadership with Board Reporting

Operationalizing AI governance often requires dedicated leadership. Take HSBC, which has recently created the position of Chief Artificial Intelligence Officer (CAIO) for the first time, providing enterprise-wide leadership for AI adoption within the bank. Such a structure ensures that AI strategy, deployment, and risk management are centrally coordinated and thus more transparent and accessible to the board.

Ensure Appointment of AI-Literate Board Members

Strengthening board composition with AI expertise goes one step further and is also a growing trend. UBS Group AG, for example, recently appointed a seasoned AI executive to its Board of Directors to substantially improve its technology and AI competence. This move reflects a strategic intent to embed digital oversight capabilities at the highest level and signals to stakeholders that AI governance is a board priority.

Implement an Integration of AI into Risk Management

Boards are increasingly embedding AI oversight into existing risk management approaches and audit structures, not least due to regulatory requirements. Deutsche Bank, for example, has integrated AI into their internal control and risk management systems, with board-level committees such as the Technology, Data and Innovation Committee overseeing these functions. This approach leverages established governance mechanisms to address emerging AI risks without creating parallel structures.

Organize External AI Advisory Boards

For organizations seeking independent perspectives, external AI advisory boards offer a robust solution that can elegantly complement internal oversight structures. This approach is exemplified by SAP which has operated an external Global AI Ethics Advisory Panel since 2018, comprising academics, policy, and industry experts, alongside its Global AI Ethics Steering Committee comprising senior SAP leaders. The panel meets biannually and reports its findings to SAP's Executive Board, providing external assurance on ethical AI practices.

Constitute Dedicated AI or Technology Committees

At the highest level of structural commitment, some boards have established dedicated committees with explicit AI mandates. A notable example is the Innovation and Technology Committee, a standing committee of the Supervisory Board of Siemens AG, which oversees AI in addition to the other strategically relevant topics innovation, technology, digitalization, data strategy, and cybersecurity. Governed by dedicated bylaws, this committee is chaired by the Chairman of the Supervisory Board and is entitled to obtain relevant information from the Executive Board and selected Siemens Executives. This strong structural approach provides focused, expert-driven oversight and is particularly suited to organizations with significant AI exposure, ambitions, or regulatory constraints.

While not all organizations will require the full suite of these mechanisms, the general direction is clear: AI governance is becoming a core board responsibility. Boards should act now to ensure they are equipped to oversee AI in a way that

aligns with their fiduciary duties, regulatory obligations, and societal expectations.

6. Conclusion: AI is Forcing Supervisory Boards to Either Reinvent Themselves as Active Co-Pilot or Risk Becoming Irrelevant, Replaceable, and Personally Exposed.

AI is compelling boards to fundamentally rethink their governance models. The shift moves boards away from backward-looking control bodies toward forward-looking architects of technological transformation. Boards can no longer rely on sporadic technology updates. Continuous AI oversight is required and must be deeply embedded in overall strategy.

This transformation demands the courage to complement individual experience with collective, data- and AI-informed judgment. Boards that proactively adapt to this shift- by building competence, adapting structures, and intelligently leveraging new tools - will not only gain speed, but also secure the long-term resilience and legitimacy of their organizations in a digitally dominated world.

Ignoring this development is no longer an option in light of regulatory realities (EU AI Act) and economic pressures. The consequences are stark: irrelevance — or personal liability. Board members should ask themselves today: are we the architects of our company's digital future, or merely reactive observers of technological disruption?

7. Checklists

Checklist: Structures and Market Positioning

(1) Do we, as a board, share a common understanding of how AI will transform our business model and risk profiles over the next three years?

(2) Do we receive reports at a frequency that reflects the pace of technological and regulatory change?

(3) Is AI a permanent element of every strategy discussion, or merely a "special topic"?

(4) Do we have sufficient board-level capability to oversee AI-related decisions?

(5) Is AI risk oversight already continuous, or still purely episodic?

Checklist: AI Strategy and Internal Use

(1) Have we explicitly defined the company's AI appetite (risk tolerance for AI experimentation)?

(2) Do we understand how AI-supported insights used in board discussions are generated and assured?

(3) Are safeguards in place to protect confidential data when AI tools are used?

(4) Do we regularly conduct scenario simulations for major strategic decisions at board level?

(5) Are the limitations and uncertainties of AI outputs clearly understood and appropriately reflected in decision-making and risk mitigation?

Checklist: Personnel and Organizational Setup

(1) Is AI explicitly included in the supervisory board qualification matrix?

(2) Does at least one member possess deep expertise in data science or algorithmic governance?

(3) Are responsibilities across audit, risk, and strategy committees clearly delineated with respect to AI?

(4) Do we have a strategy for continuous board education?

(5) Is board performance in technological oversight evaluated annually?

Checklist: Role Allocation and Escalation

(1) Has the executive board presented an integrated AI roadmap with quantifiable ROI targets?

(2) Is the executive board's AI management competence evaluated annually?

(3) Do we have the capacity to obtain independent third-party opinions when management projections conflict with AI analyses?

(4) Is there a clear executive AI policy approved by the supervisory board?

Checklist: Legal Certainty and Compliance

(1) Have we implemented a legally compliant record-keeping strategy under the EU AI Act?

(2) How do we ensure the required "human oversight" in automated decision processes?

(3) Have our AI supplier contracts been reviewed with respect to liability allocation in the event of model failures?

(4) Is there an emergency plan for AI system failures or severe bias incidents?

(5) Is AI governance explicitly integrated into the existing enterprise risk management (ERM) framework?

Checklist: Anchoring AI Governance in Boards

(1) Is AI oversight embedded in the board or a dedicated committee?

(2) Is there a formal AI governance framework or policy in place?

(3) Are AI risks integrated into internal audit and risk management?

(4) Is AI literacy part of board onboarding or training?

(5) Are external experts or panels involved in AI oversight?

2026 - R. Rapoport, M. Dimofte, R. Theiselmann, Dr. B. Braunmüller

Millennials4Boards
Eichenweg 27a,
Kilchberg, ZH 8802,
Switzerland, 0762096451