

CHAPTER

5.4

TECHNOLOGY AND INNOVATION

How the Board oversees digital transformation, the use of AI and the company's capacity to innovate.

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5.4.1

DIGITAL TRANSFORMATION AND AI

Companies have recognised the importance of digital transformation for staying competitive, improving efficiency and meeting customer expectations. Today every company is involved in digitalisation to some extent, and the role of the Board is to lead and oversee the digital transformation of the company and to ensure that:

- digital transformation is aligned with the company's long-term vision and strategic objectives;
- digital initiatives are integrated into the overall business strategy;
- resources are used efficiently;
- it strengthens the company's competitive advantages and creates long-term value.

The Board plays a key role in setting the strategic direction of digital transformation, overseeing the process and ensuring that the transformation is aligned with the overall goals and interests of the company.

It is important to emphasise that the Board itself must ensure that it possesses the competencies required for digital transformation. If needed, additional Board members should be recruited to bring the essential competencies, experience and know-how to the Board.

The Board's role in digital transformation and its oversight has several aspects:

1. ***Setting the strategic direction of digital transformation.*** The Board defines the company's overall strategy, including its approach to digital transformation. This requires a clear view of the potential impact of digitalisation on the company's industry, and guidance to the company in implementing a digitalisation strategy that improves operations and enhances competitiveness.
2. ***Risk governance.*** Digital transformation usually involves significant change, the introduction of new technologies and adaptation to an evolving business environment. The Board must ensure that the related risks are identified, assessed and properly managed, and that the company's digital initiatives are aligned with its risk appetite and compliance requirements.
3. ***Resource allocation and ensuring the required capacity.*** The Board approves the budgets and resources for digital transformation initiatives and needs to ensure that the necessary financial, human and technological resources are available to support successful implementation.

4. ***Talent and leadership development.*** The Board should pay attention to the development and recruitment of leaders with digital expertise. This includes hiring executives who understand digital technologies and can drive the transformation agenda. The organisational structure should also be reviewed and adjusted where necessary. The Board may also encourage a culture of continuous learning, to ensure that the Board itself and the existing leadership are well equipped for the digital age.
5. ***Monitoring progress. The*** Board must set clear goals and establish key performance indicators (KPIs) to measure the progress of digital initiatives and assess the success of the transformation. It should receive regular updates and reports on the status of digital transformation projects, allowing it to assess how effectively the digitalisation strategy is being implemented and to make informed decisions.

Digital transformation initiatives are complex and require new competencies, many changes and substantial resources. It is no surprise that many of them fail. Common reasons for failure include:

- Lack of a clear strategy and vision, and of their communication to employees and stakeholders.
- Resistance to change and to the adoption of new technologies and processes.
- Insufficient skills at Board and management level.
- Poor integration of new technologies with existing systems.
- Poor data quality and governance, leading to inaccurate insights and decisions, and the lack of a data-centric culture and of an understanding of the value of data.
- Inadequate cybersecurity measures and protocols, leading to vulnerabilities and a failure to address the security risks associated with new technologies and data storage.
- Budget overruns, poor financial planning and underestimation of the costs of digital transformation projects.
- Lack of a customer-centric approach: focusing on technology rather than on understanding and meeting customer needs and expectations.
- Poor project management practices, including inadequate planning and monitoring.
- Failure to set realistic timelines and milestones.
- Difficulties in managing relationships with technology vendors and service providers, and over-reliance on external partners without ensuring alignment with the company's goals.

- Failure to establish key performance indicators (KPIs) and metrics for evaluating the success of digital transformation.
- Inability to measure and demonstrate the return on investment (ROI).

The Board needs to ensure that the digital transformation adheres to legal and ethical standards. Compliance with regulations on data protection, security, artificial intelligence and other relevant areas must be a priority.

Artificial intelligence

Artificial intelligence has become a matter for the Board, not only for management. The Board's role is oversight and strategic alignment, while management is responsible for the day-to-day execution of AI projects. In practice this means five things: approving an AI policy that sets the company's principles for the responsible use of AI (purpose and scope, governance and accountability, risk management, ethical standards such as fairness, transparency and human oversight, data governance and regulatory compliance) and aligning AI initiatives with the business strategy; approving the budgets and resources for AI and ensuring that the company has the infrastructure and the talent to deliver; ensuring that AI-related risks, including bias, privacy, security and legal liability, are assessed and managed within the company's overall risk management framework and that the requirements of the EU Artificial Intelligence Act are met; setting clear KPIs to evaluate the return on AI investments and reviewing progress regularly; and overseeing the impact on employees, the organisational culture and other stakeholders, including the training of the Board itself.

A useful distinction for the Board is that between automation, which follows fixed rules and mainly requires monitoring of efficiency and reliability, and AI, which learns from data and therefore calls for a more demanding governance framework. BICG's Guidelines for Integrating Artificial Intelligence into the Board Agenda provide a fuller treatment, including a Board-level AI governance checklist, an opportunities and risks matrix and an implementation roadmap.[22]

In summary, the Board plays a pivotal role in guiding and overseeing the digital transformation, ensuring that it is aligned with the company’s strategic objectives, managing risks, allocating resources and fostering a culture that supports innovation and adaptability in the digital era.

22 Baltic Institute of Corporate Governance, Guidelines for Integrating Artificial Intelligence (AI) into the Board Agenda, BICG Policy Group Lithuania, [2026], available at www.bicg.eu.

KEY TAKEAWAYS

A. Every company is digitalising to some extent. The Board leads and oversees the digital transformation and ensures that it is aligned with the long-term vision and strategy, integrated into the business strategy, resourced efficiently and focused on competitive advantage and long-term value.

B. The Board must have, or acquire, the competencies to do this: through the recruitment of Board members with digital expertise and through continuous learning.

C. The Board's role has five aspects: setting the strategic direction, risk governance, resource allocation, talent and leadership development, and monitoring progress through clear goals, KPIs and regular reporting.

D. Many digital initiatives fail for predictable reasons: unclear strategy, resistance to change, insufficient skills, poor integration and data quality, weak cybersecurity, budget overruns, a technology-first rather than customer-first approach, poor project management and over-reliance on vendors.

E. Digital transformation must comply with legal and ethical standards, including data protection, security and the emerging rules on artificial intelligence.

F. Artificial intelligence is a Board matter: the Board approves an AI policy, ensures that AI risks are managed within the risk management framework and that the EU AI Act is complied with, sets KPIs for AI investments and oversees the impact on people and culture.

QUESTIONS FOR THE BOARD

1. *Is our digital strategy part of the company strategy, and can the Board explain how digitali transformation changes our industry and our competitive position?*
2. *Does the Board have sufficient digital competence to challenge management, and if not, how will we close the gap?*
3. *Which digital transformation projects are under way, what are their goals and KPIs, and how do they perform against budget and timeline?*
4. *Are the risks of digital transformation, including cybersecurity, data quality and dependence on vendors, in the risk register and within our risk appetite?*
5. *Do we have the leadership, skills and organisational structure to deliver the transformation, and is the culture supporting rather than resisting it?*
6. *Where does the company use or plan to use artificial intelligence, and how do we ensure that its risks are managed and legal requirements met?*

5.4.2

R&D AND INNOVATION

Research and development (R&D) and innovation are two crucial activities that contribute strongly to a company's competitive advantage, market differentiation, revenue growth, cost efficiency, customer experience, brand, risk mitigation and overall success.

The Board plays a vital role in guiding and overseeing the company's R&D and innovation activities. Its responsibilities include:

1. Setting the strategic direction. The Board aligns R&D and innovation efforts with the company's long-term objectives, including the goals and priorities for R&D and innovation.
2. Approving budgets. The Board approves the budgets for R&D and innovation activities in line with the company's goals.
3. Providing support and resources. The Board supports R&D efforts by ensuring access to the necessary resources, such as talent (internal and external) and infrastructure. The Board should approve strategic partnerships that contribute to the achievement of the company's innovation goals.
4. Oversight and risk management. The Board oversees R&D and innovation activities to ensure that they are conducted in a manner consistent with legal, business and ethical standards. This includes managing the risks associated with R&D and innovation investments and projects, and ensuring that appropriate controls are in place.
5. Monitoring performance. The Board monitors the performance of R&D and innovation initiatives, assessing progress towards strategic objectives and evaluating the return on investment. This may involve reviewing key performance indicators, milestones achieved and financial metrics related to R&D and innovation.
6. Fostering a culture of innovation. The Board should ensure that top management fosters a culture of innovation within the company, encouraging creativity, experimentation and knowledge sharing among employees.
7. Identifying emerging technologies and trends. The Board should stay informed about emerging technologies, market trends and competitive dynamics that may affect the company's R&D and innovation strategy, and may provide guidance on adapting to changing market conditions and seizing new opportunities.

8. Holding top management accountable. The Board should hold top management accountable for the company's R&D and innovation performance, ensuring that resources are managed effectively and strategic objectives achieved. Effective communication between the Board and the top management team is essential for this oversight.

Three questions come up repeatedly in Board discussions of R&D and innovation and deserve a closer look.

Balancing incremental and disruptive innovation. Most of a company's innovation effort goes into incremental improvements to existing products, processes and services: these are lower in risk, closer to customers and easier to measure. Disruptive innovation, which creates new business models or markets, is rarer, riskier and slower to pay back, but it is what protects the company from being overtaken. The Board's task is not to choose between the two but to make sure that the portfolio is deliberately balanced. A practical approach is to ask management to present R&D and innovation projects as a portfolio, sorted by time horizon (short, medium and long term) and by level of risk, and to agree what share of resources should go to each category given the company's strategy, its position in the industry and the pace of change around it. A company whose portfolio contains only incremental projects is usually under-investing in its future; one with only ambitious projects is usually over-estimating its ability to deliver them. The Board should revisit the balance at least once a year and whenever the strategy changes.

Protecting intellectual property. The results of R&D are worth little if they can be freely copied. The Board should satisfy itself that the company has an intellectual property strategy that fits its business: what should be patented, what is better kept as a trade secret, which trademarks and designs should be registered and in which markets, and how software, data and know-how are protected. Equally important are the contracts through which intellectual property flows: employment and contractor agreements should assign to the company the rights in what is developed for it, and agreements with partners, universities and suppliers should state clearly who owns the results of joint work. The Board should also ensure that the company respects the rights of others, since infringement claims can be as damaging as the loss of the company's own rights, and it should receive a periodic overview of the intellectual property portfolio, its value and any disputes.

Comparing R&D spending with peers. There is no correct level of R&D spending; the right amount depends on the sector, the strategy and the stage of the company. What the Board can and should do is compare. Useful benchmarks are R&D expenditure as a share of revenue, the split between research and development,

the proportion spent on incremental as opposed to new products, and the share of revenue that comes from products introduced in the last three to five years, each compared with listed competitors, sector averages and the company's own history. Public sources are often sufficient: the annual reports of listed peers, sector studies and the EU Industrial R&D Investment Scoreboard. The purpose of the comparison is not to match the peers but to explain the difference: a company that spends well below its sector should be able to say why that is consistent with its strategy, and one that spends well above should be able to show the results.

KEY TAKEAWAYS

- **A.** R&D and innovation are crucial to competitive advantage, market differentiation, growth, efficiency, customer experience and brand, and also to risk mitigation.
- **B.** The Board sets the strategic direction for R&D and innovation, approves the budgets, ensures the resources and strategic partnerships needed, and oversees that activities meet legal, business and ethical standards with appropriate controls.
- **C.** The Board monitors performance through key performance indicators, milestones and return on investment, and holds top management accountable for results.
- **D.** The Board should ensure that management fosters a culture of innovation, encouraging creativity, experimentation and knowledge sharing.
- **E.** The Board should stay informed about emerging technologies, market trends and competitive dynamics, so that it can guide the company in adapting and seizing opportunities.
- **F.** The Board judges the innovation portfolio as a whole, balancing incremental and disruptive projects by time horizon and risk; it ensures that the company's intellectual property is protected and the rights of others respected; and it compares R&D spending and results with peers to test whether the level of investment fits the strategy.

QUESTIONS FOR THE BOARD

1. *What are our innovation goals and priorities, and how are they linked to the company's long-term strategy?*
2. *How much do we invest in R&D and innovation compared with our competitors, and what has that investment delivered in the last three years?*
3. *Which KPIs and milestones does the Board use to monitor R&D and innovation, and when did it last review them?*
4. *Do we have the talent, partnerships and infrastructure needed for our innovation goals, and is our intellectual property protected?*
5. *Does the company culture encourage experimentation and tolerate well-managed failure, and how does the Board know?*
6. *Which emerging technologies or market trends could disrupt our business, and what is management doing about them?*
7. *Is our innovation portfolio deliberately balanced between incremental improvements and more ambitious projects, and when did the Board last review that balance?*