

Deep Tech 2026 Proxy Season Report

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The State of Governance in the Deep Tech Sector

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Executive Summary

Our analysis of 101,458 companies across the United States and Canada reveals a Deep Tech sector characterized by exceptional technical expertise alongside significant governance gaps. This report examines the structural patterns that define corporate oversight in this critical sector as it transitions from research-focused ventures to commercial enterprises with systemic impact.

Key Findings

Board Composition: * 72%+ average board independence (measured by formal relationships) * 11.4% average women directors across the sector * 41.7% of companies have zero women on their boards * 3.4 technical experts per board (average)

Governance Structures: * Limited AI oversight disclosure: Deep Tech companies trail broader market benchmarks?approximately 40% of Fortune 100 companies and 30% of S&P 500 companies now disclose formal committee-level AI oversight, yet explicit disclosure remains rare in the Deep Tech sector. * High concentration of dual-class share structures among founder-led companies. * Limited proxy access and shareholder rights across the sector.

These findings suggest a sector that has optimized for technical competence while lagging in transparency around governance for emerging technology risks?a notable gap given Deep Tech's central role in AI development. As these companies scale and face increased regulatory scrutiny, this gap presents both risk and opportunity for investors and boards.

Strategic Note: The Public-Private Governance Divide

Critical Context for Interpreting This Report

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A fundamental characteristic of this dataset is its composition: approximately 95% of the companies analyzed are private entities (filing under Regulation D), while only 5% are public companies. This distinction is crucial for interpreting our findings and applying our recommendations.

Why This Matters

1. Relevance of Proxy Recommendations: * Public Companies: Subject to SEC/SEDAR proxy filings, shareholder activism, and index inclusion requirements. Recommendations on proxy voting, shareholder proposals, and "vote no" campaigns are directly applicable. * Private Companies: Do not hold public proxy votes or face shareholder proposals in the same way. They are not accountable to public shareholders and often prioritize founder control and flexibility over formal governance structures.

2. Differing Governance Standards: * Private companies are not bound by the same diversity, disclosure, or shareholder rights expectations as public companies. * Benchmarks such as the S&P 500 or Fortune 100 are "apples-to-oranges" comparisons for early-stage private firms, which operate under different regulatory and investor pressures.

3. Data Skew: * The finding that 41.7% of companies have zero women directors and limited AI oversight disclosure heavily reflects the dominance of early-stage, founder-led private companies. These entities often lack formal governance structures until they approach an IPO or late-stage funding. * Readers should avoid overgeneralizing private company practices as indicative of the entire sector, particularly for mature public companies.

How to Use This Report: * For Public Companies: Focus on the specific guidance regarding proxy voting, shareholder rights, and disclosure transparency. * For Private Companies: View the "gaps" not as immediate failures, but as a roadmap for professionalization. The focus should be on foundational governance (e.g., board skills matrices, early diversity planning) and preparing for future public scrutiny.

Methodology & Interpretation Guidelines

Dataset Overview

* Total Companies Analyzed: 101,458 * Primary Sources: SEC DEF 14A (Proxy Statements) and SEDAR+ filings * Period Covered: Fiscal years ending 2024/2025 * Geographic Scope: United States and Canada

What This Data Represents

Our analysis measures *disclosed* governance practices as captured in regulatory filings. It is important to understand both the capabilities and limitations of this approach:

High Confidence Metrics: * Gender diversity (11.4% women): Based on honorifics (Ms./Mrs.) and pronouns in director biographies. Manual audit confirmed 95% accuracy. * Board independence (72%+): Based on relationship disclosures required by SEC rules.

Context-Dependent Metrics: * Technical expertise (3.4 experts): We define "Technical Expert" as directors whose biographies explicitly reference cybersecurity, artificial intelligence, machine learning, CTO roles, or Ph.D.s in engineering/computer science. This is a conservative definition; directors with general technology

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backgrounds do not automatically qualify. * AI Oversight: Using exact string matching for dedicated "AI Oversight," "Artificial Intelligence Committee," or similar formal committee names in disclosed charters, we found minimal explicit disclosure in Deep Tech filings. For context, approximately 40% of Fortune 100 companies and 30% of S&P 500 companies disclosed formal AI committee oversight in 2024-2025, while only 27% of all public companies have incorporated AI governance into committee charters. Deep Tech appears to trail these benchmarks significantly, suggesting either: (1) less formalized governance structures despite high AI exposure, or (2) management through existing committees without transparent disclosure. The key question for investors is whether the current approach?whatever it may be?provides adequate oversight for companies at the center of AI development.

Important Limitations

* Disclosure vs. Practice: We measure what companies disclose, not necessarily what they do. Absence of disclosure may indicate either absence of practice or failure to communicate existing practices. * Public/Private Mix: The dataset includes both public companies and private entities filing under Regulation D. Our internal analysis indicates a split of approximately 95% private/unlisted and 5% public companies. This heavy weighting toward private companies, which have different governance standards, significantly influences aggregate metrics like diversity. Readers must recognize that the "Deep Tech Sector" aggregate is largely a reflection of private market practices. * Sector Definition: "Deep Tech" is defined broadly to include semiconductors, AI, biotechnology, advanced materials, quantum computing, aerospace, and related fields.

The 2025 Proxy Season in Review

The 2025 season marked a transition point for Deep Tech governance, characterized by three significant trends:

1. Increased Scrutiny of AI Governance

Following the generative AI surge of 2023-2024, investors began demanding concrete evidence of responsible AI frameworks. Shareholder proposals requesting AI ethics reports saw support rise from approximately 15% to 25%, signaling mainstream investor concern.

According to ISS-Corporate research, disclosure of board-level AI oversight in the S&P 500 increased by over 84% year-over-year, with 31.6% of companies disclosing some form of AI oversight by 2024 and approximately 40% of Fortune 100 companies assigning AI oversight to committees by 2025. The debate shifted from **whether** AI should be governed to **how** it should be governed: through integrated oversight in existing committees (typically Audit) or via dedicated structures with specialized charters.

Deep Tech companies appear to have lagged this broader market trend in formal AI oversight disclosure, despite being at the center of AI development.

2. Diversity Progress Plateaus

After several years of incremental improvement, progress on board gender diversity stalled. The percentage of women on Deep Tech boards remained essentially flat at 11-12%. This suggests that companies have added initial diverse directors but have not continued the structural work toward balanced representation.

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3. Governance Activism Emerges

A new form of activism focused on fundamental governance structures gained momentum. Dual-class share structures faced renewed criticism, with "vote no" campaigns against Nominating Committee Chairs reaching record levels at companies with concentrated founder control. While few structures were dismantled, the increased opposition signals growing investor impatience.

2026 Market Outlook

The Technical Expertise Advantage

Deep Tech boards have responded to increasing technological and geopolitical complexity by prioritizing domain expertise. With an average of 3.4 technical experts per board—significantly higher than other sectors—these companies are well-positioned to understand technical feasibility, navigate intellectual property risks, and assess cybersecurity threats.

This technical literacy is a genuine competitive advantage. In an environment of state-sponsored IP theft, semiconductor export controls, and existential cybersecurity risks, boards benefit from directors who can read technical specifications and understand engineering trade-offs.

Potential Challenge: Technical optimization may create blind spots in other critical areas including commercial strategy, organizational culture, regulatory affairs, and stakeholder management. The question for 2026 is whether boards can maintain technical excellence while broadening their governance capabilities.

The 2026 IPO Pipeline: A Governance Stress Test

The anticipated public listings of major Deep Tech players in 2026—headlined by the potential partial spin-off or liquidity events for SpaceX and other "decacorns"—will serve as a stress test for the sector's governance maturity.

* The "SpaceX Effect": As high-profile private companies prepare for public markets, their governance structures (often characterized by super-voting shares and board loyalty to founders) will face intense scrutiny from institutional investors and proxy advisors. * The Transition Gap: Our data suggests a steep "governance cliff" between private and public Deep Tech firms. Companies planning an IPO in 2026-2027 must urgently bridge the gap between "founder-friendly" private boards and "investor-ready" public boards, particularly regarding independent oversight and diverse representation.

The Diversity Question

The 41.7% zero-women statistic stands in stark contrast to the S&P 500, where gender diversity has become standard practice. This gap presents several considerations: * Market Pressure: As Deep Tech companies seek inclusion in major indices, many of which have diversity expectations, they may face requirements to rapidly diversify boards. This could create competition for qualified diverse directors. * Cognitive Diversity: Research suggests that homogeneous groups may be less effective at identifying complex risks and more susceptible to groupthink. In a sector dealing with high-stakes technologies, diverse perspectives on risk identification may have material value. * Talent Pool Reality: The specialized nature of certain Deep Tech fields (particularly quantum physics and advanced semiconductors) presents genuine challenges in finding

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directors with both domain expertise and diverse backgrounds. However, sectors like biotechnology and clean energy demonstrate that technical excellence and diversity can coexist.

Stakeholder Guidance

Different stakeholders face different opportunities and constraints in addressing these governance patterns.

For Institutional Investors

Key Consideration: How to enforce governance standards without stifling innovation in a critical sector. Potential Approaches: * Establish clear voting policies on board diversity, particularly for companies with zero women directors. * Request detailed disclosure of AI risk management: which committee has oversight, what expertise members possess, meeting frequency, and how AI risks are assessed. * Compare Deep Tech companies' AI governance disclosure to the 30-40% of large companies now providing explicit committee-level oversight. * Engage with companies to understand whether their governance approach is appropriate for their specific AI exposure and development activities. * Consider "vote against" campaigns for Nominating Committee leadership where governance fails to meet minimum standards.

Trade-off to Consider: Punitive voting can send strong signals but may strain engagement relationships necessary for long-term change.

For Venture Capital and Private Equity

Key Consideration: When to professionalize governance structures in high-growth companies. Potential Approaches: * Introduce independent directors with scale-up governance experience at Series B or C, before IPO pressures arise. * Conduct board skills assessments to identify gaps beyond technical expertise. * Consider sunset clauses for dual-class structures at the investment stage. * Build governance expectations into term sheets and board composition agreements.

Trade-off to Consider: Early governance investment has costs (cash, founder control dilution) but may increase exit valuations and reduce IPO complications.

For Boards and Corporate Secretaries

Key Consideration: How to demonstrate governance maturity to the market. Potential Approaches: * Enhance Disclosure: Many directors have relevant expertise not captured in brief biographies. Rewrite director profiles to explicitly highlight governance-relevant capabilities in AI, cybersecurity, and risk oversight. * Committee Structure Review: Assess whether current committee structures (especially Audit) are overburdened. If AI risk is managed within an existing committee, ensure this is clearly disclosed along with relevant member expertise. Evaluate whether a dedicated Technology & Risk Committee would provide more focused oversight or whether enhanced disclosure of integrated oversight is sufficient. * Skills Matrix Development: Conduct formal gap analysis to identify missing capabilities and recruit specifically to address them. * Proactive Stakeholder Communication: Engage with major investors in advance of proxy season to explain governance approach to AI and technology risks, including the rationale for integrated vs. standalone oversight structures.

Trade-off to Consider: Governance changes require board consensus and may face founder resistance, but

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proactive evolution is generally less costly than reactive crisis management.

For Individual Investors

Key Consideration: How to evaluate governance quality when technical complexity makes substantive assessment difficult. Potential Approaches: * Support shareholder proposals requesting transparency on AI governance, lobbying activities, and human capital management. * Look for warning signs: The combination of dual-class shares, limited board independence, and zero diversity suggests concentrated power with minimal oversight. * Use governance ratings as one input but recognize their limitations in assessing technical boards. * Consider governance quality as part of long-term risk assessment, not just values alignment.

Trade-off to Consider: Governance-driven investing may exclude high-performing founder-led companies; investors must determine their own risk tolerance.

Twenty Key Insights

Our analysis identified twenty structural patterns that define current Deep Tech governance:

1. Strong Formal Independence (72%+): Most boards meet technical independence standards, though social ties (university, prior employment) create "soft" dependencies not captured in disclosures.
2. Gender Diversity Deficit (11.4%): Significantly below broader market norms and showing minimal year-over-year improvement.
3. Exceptional Technical Literacy (3.4 Experts): Sector-leading domain expertise on boards, particularly in cybersecurity and engineering.
4. Limited AI Oversight Disclosure: Deep Tech companies trail broader market benchmarks in transparent AI governance. While 40% of Fortune 100 and 30% of S&P 500 companies now disclose formal AI committee oversight, such disclosure remains minimal in Deep Tech—a notable gap for a sector at the center of AI development.
5. Younger Director Demographics: Technical skill requirements drive recruitment of younger directors compared to traditional industries.
6. Low Over-Boarding Risk: Most directors serve on only 1-2 boards, suggesting focused engagement.
7. Equity-Heavy Compensation: Director pay weighted toward stock grants, creating strong shareholder alignment but potential short-term incentives.
8. Audit Committee Scope: Most companies appear to manage cybersecurity and technology risk through Audit Committees alongside traditional financial oversight, consistent with broader market trends where audit committees are the most common home for AI oversight. The question is whether these committees have adequate bandwidth, meeting frequency, and technical expertise for this expanded mandate.
9. Persistent Dual-Class Structures: Founders retain super-voting control, justified by need for long-term strategic vision.
10. Environmental Focus in ESG: Strong emphasis on climate and energy efficiency; less attention to social metrics and governance structure.
11. Geographic Concentration: Delaware incorporation with California/Massachusetts headquarters creates specific regulatory exposures.
12. Academic Pipeline: Significant director recruitment from university faculty, bringing theoretical depth but variable commercial experience.
13. Cybersecurity as Top Risk: Near-universal disclosure of cyber threats as material risk, yet inconsistent board-level cyber expertise.
14. Limited Shareholder Rights: Many companies restrict special meeting calls and written consent rights.
15. Polarized Board Tenure: Either very short (recent IPOs) or very long (established firms), with limited middle ground.
16. Rare Proxy Access: Few companies grant shareholders rights to nominate directors via company proxy.
17. Virtual Meeting Preference: Sector has broadly adopted virtual-only annual meetings, reducing direct shareholder engagement.
18. Limited Human Capital Disclosure: Despite talent intensity, few companies disclose retention, turnover, or culture metrics.
19. Opaque Political Engagement: Significant regulatory interaction and lobbying activity with

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minimal disclosure. 20. Governance Rating Gap: Growing divergence between governance ratings assigned by agencies and operational governance reality.

Sector Analysis

The "Deep Tech" designation encompasses diverse sub-sectors with distinct governance patterns:

Semiconductors & AI Hardware

* Profile: 9.7% women on boards | 40% zero-women companies | 3.8 technical experts * The semiconductor sector shows the strongest resistance to diversification, rooted in hardware engineering culture dating to the 1970s-80s. Boards typically include former CEOs of peer companies, providing deep industry knowledge. The primary governance challenge is geopolitical risk management?export controls, supply chain resilience, and US-China trade dynamics require specialized expertise.

Autonomous Systems

* Profile: Limited comprehensive data available (many private/defense-subsidary structures) * The dual-use nature (civilian and military applications) creates unique ethical oversight requirements. "Responsible use" committees appear more frequently here than in pure software sectors, though formal disclosure remains limited.

Energy & Climate Technology

* Profile: 16.4% women on boards | 22.2% zero-women companies * This sector leads in diversity metrics, likely driven by regulatory requirements (public utility interfaces) and ESG-focused investor pressure. Boards typically include former regulators and policy experts, reflecting the paramount importance of regulatory risk management.

Biotechnology

* Profile: 12.8% women on boards | 3.0 technical experts (as measured) * Biotech boards are heavily populated with MDs and PhDs, though our technical expert count understates expertise because we search for "technology" keywords rather than "medical" credentials. Governance focuses on clinical trial oversight and often relies on Scientific Advisory Boards parallel to statutory boards. The binary nature of clinical trial outcomes drives risk management priorities.

Advanced Materials

* Profile: Typically small-cap with minimal disclosure * Companies developing graphene, metamaterials, and similar innovations often operate with founder control and minimal governance formalization during long development cycles. Governance tends to professionalize only after commercial breakthroughs.

Quantum Computing & Photonics

* Profile: 6.6% women on boards | 58.3% zero-women companies (highest in sector) * The most male-dominated segment, reflecting an extremely small and historically homogeneous talent pool in quantum

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physics. Boards draw almost exclusively from narrow academic networks. A key governance risk is managing expectations?preventing over-promising on timelines that may not be physically achievable.

Space & Aerospace

* Profile: Heavy DoD influence on governance structure * Boards frequently include retired military leadership, bringing national security expertise but potentially reinforcing hierarchical cultures. The intersection with defense contracting creates unique compliance requirements.

Cybersecurity & Cryptography

* Profile: High technical focus; moderate diversity * Governance failures in this sector are existential?a security breach can destroy company value instantly. Despite this, boards often lack diverse perspectives, concentrating intensely on technical defense capabilities.

Conclusions & Recommendations

The Deep Tech sector stands at a governance crossroads. While technical expertise is high, the structures needed to manage complex risks?particularly in AI and diversity?are lagging behind broader market standards. However, the path forward differs significantly for public and private entities.

For Public Companies (and Pre-IPO)

Focus: Compliance, Disclosure, and Shareholder Relations

1. Formalize AI Oversight: Move beyond implicit oversight. Explicitly charter a committee (Risk, Audit, or Technology) with AI governance responsibilities to satisfy growing investor demand for transparency.
2. Address Diversity Gaps: With 41.7% of the broader sector having zero women, public companies must differentiate themselves. Prioritize diverse board recruitment to align with index requirements and proxy advisor expectations.
3. Enhance Shareholder Rights: Review dual-class structures and consider sunset provisions. Engage proactively with shareholders on governance proposals to avoid "vote no" campaigns.

For Private Companies

Focus: Foundational Governance and Future-Proofing

1. Build the Foundation: Do not adopt public company burdens prematurely, but do implement foundational tools like a Board Skills Matrix. Ensure you have the right mix of technical and commercial talent.
2. Plan for Diversity Early: Diversity is harder to fix later. Start building a diverse pipeline of independent directors now, even if you don't fill the seats immediately.
3. Prepare for Scrutiny: Understand that the "governance gap" will close rapidly as you approach an IPO. Use the public company benchmarks in this report as a "North Star" for where your governance needs to be in 3-5 years.

Final Thought

Whether public or private, the most successful Deep Tech companies in 2026 will be those that view governance not as a compliance burden, but as a strategic asset for navigating the complex landscape of

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technological risk.

2026 Voting Considerations

Investors approaching the 2026 proxy season may wish to consider:

On Board Composition: * Companies with zero women directors face reputational and potential index-exclusion risks. * Effectiveness of Nominating Committee leadership in advancing board evolution. * Balance between technical expertise and broader governance capabilities.

On AI and Technology Oversight: * Where and how AI-related risks are managed (which committee, meeting frequency, member expertise). * Whether Deep Tech companies are providing AI governance disclosure comparable to the 30-40% of Fortune 100 and S&P 500 companies that now disclose committee-level oversight. * Quality and transparency of disclosure explaining governance approach to AI and emerging technology risks. * Whether the chosen governance structure is appropriate given the company's central role in AI development.

On Shareholder Rights: * Appropriateness of dual-class structures given company maturity and performance. * Adequacy of shareholder rights to call meetings, nominate directors, and access proxy.

On Shareholder Proposals: * Proposals requesting AI ethics reports provide transparency on governance approach. * Lobbying disclosure proposals relevant given sector's regulatory exposure. * Human capital proposals address key risk in talent-intensive sector.

Each investor must weigh these considerations against their own investment mandates, time horizons, and risk tolerances.

Appendices

Appendix A: Data Extraction Methodology

Gender Diversity Analysis * Method: Regex analysis of director biographies in proxy statements * Search Terms: Honorifics (Ms., Mrs.), pronouns (she/her), gendered names * Validation: Manual audit of 50-company random sample showed 95% accuracy * Limitations: Binary gender analysis only; does not capture non-binary directors

Technical Expertise Analysis * Method: Keyword search of director biographies * Required Keywords: "Cybersecurity" OR "Artificial Intelligence" OR "Machine Learning" OR "Chief Technology Officer" OR "CTO" OR ("Ph.D." AND "Engineering") OR ("Ph.D." AND "Computer Science") * Rationale: Designed to identify specific domain expertise rather than general technology industry experience * Limitations: May undercount directors with relevant expertise described differently; particularly affects biotech (medical vs. technical terminology)

AI Oversight Analysis * Method: Exact string matching in committee names and charter descriptions *

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Search Terms: "AI Oversight," "Artificial Intelligence Committee," "Technology Ethics Committee," "AI Governance," "Artificial Intelligence Oversight" * Findings: Minimal disclosure of dedicated AI oversight committees in Deep Tech sector * Benchmark Context: Research from ISS-Corporate and EY found that approximately 40% of Fortune 100 companies and 30-31% of S&P 500 companies disclosed some form of committee-level AI oversight by 2024-2025, while the National Association of Corporate Directors found only 27% of public companies have formally incorporated AI governance into committee charters. Deep Tech companies appear to disclose AI oversight structures at rates significantly below these benchmarks. * Critical Interpretation: This measures transparency of formal oversight structures, not the presence or quality of AI risk management. Many companies may address AI risks through existing Audit or Risk committees without formal charter amendments or explicit disclosure. However, in a sector central to AI development, the disclosure gap relative to companies merely adopting AI is notable and raises questions about governance transparency. * Limitations: Does not capture informal AI risk management, discussion within other committees without charter changes, or management-level oversight frameworks unless explicitly disclosed in proxy statements

Board Independence Analysis * Method: Extraction of relationship disclosures required under SEC rules * Standards: Based on NYSE/NASDAQ independence definitions * Limitations: Captures only formal relationships (employment, family, financial); does not measure social relationships

Appendix B: Limitations & Areas for Further Research

Acknowledged Limitations * Board Chair Gender: This metric was excluded due to database schema constraints during analysis period. This represents a meaningful gap in understanding leadership dynamics. * Public vs. Private Companies: The dataset includes Regulation D filers (private companies) alongside public companies. Our internal analysis indicates a split of approximately 95% private/unlisted and 5% public companies. This heavy weighting toward private companies, which have different governance standards, significantly influences aggregate metrics like diversity. * Performance Correlation: This report does not link governance metrics to company performance outcomes (returns, innovation measures, incident rates). Recommendations are based on risk management principles and market standards rather than demonstrated causal relationships. * International Context: Analysis limited to US and Canadian companies. Comparative analysis with European, Asian, or Israeli Deep Tech sectors would provide valuable context.

Areas for Further Research * Director Supply Analysis: If a significant portion of companies need to add diverse directors, what is the available talent pool and what are the competitive dynamics? * Cost-Benefit Quantification: What are the actual costs of enhanced governance structures for companies at different stages, and how do these compare to measurable benefits? * Governance-Performance Link: Rigorous analysis correlating governance metrics with operational performance, risk incidents, and market returns. * Qualitative Board Effectiveness: Beyond composition metrics, how effective are boards at oversight? This requires case studies and interviews beyond regulatory filings.

Dissenting Perspectives * Meritocracy Argument: Some contend that board seats should be awarded purely on technical merit and that diversity mandates dilute quality. Counter-perspective: Evidence from biotech and clean energy sectors shows technical excellence and diversity can coexist. The question is whether current selection processes adequately identify all qualified candidates or rely on limited networks. * Founder Control Argument: Proponents argue that founder control enables long-term vision over quarterly pressure, citing successes like Amazon and Alphabet. Counter-perspective: Not all founders create long-term value, and mechanisms should exist to evaluate performance. Sunset clauses and performance-based control structures may balance these interests. * Premature Governance Argument: Early-stage companies argue that formal governance structures are costly distractions from product development. Counter-perspective: Basic governance foundations are less expensive to build early than to retrofit later. The question is

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appropriate governance for each lifecycle stage, not whether governance matters.