A Conversation on Digital Transformation

with Professor Helmut Krcmar (TUM) & Thomas Saueressig (SAP) moderated by Julie Teigland (EY)

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Executive Summary

Digital transformation has moved from strategic aspiration to existential imperative. On 9 February 2026, Board Agora convened senior board members with Thomas Saueressig from SAP and Professor Helmut Krcmar from TUM to examine how boards can navigate transformation in the age of artificial intelligence. The discussion revealed a stark paradox: whilst technology adoption has accelerated dramatically, with the average enterprise now deploying 4,500 applications compared to 400 in 2004, productivity gains have not kept pace. This tenfold increase in technological complexity underscores that digital transformation remains fundamentally a human and organisational challenge rather than a purely technological one.

The data exposes critical competitive gaps through what emerged as the session's most sobering metric: whilst 75 per cent of US companies and 65 per cent of Chinese companies use AI productively in enterprise contexts, only 15 per cent of German companies have achieved similar deployment. This disparity signals not merely a temporary lag but a structural disadvantage threatening European firms' long-term viability. As Saueressig emphasised, digital transformation too often remains confined to IT departments when it actually demands fundamental changes to data architecture, semantic alignment, process integration, and critically how people work. The human dimension, whilst universally acknowledged, receives far less attention and investment than technology procurement.

The session identified a fundamental governance evolution: traditional board oversight no longer suffices. Participants unanimously rejected the conventional approach of maintaining clear boundaries between board strategy challenge and management execution. The pace and scale of technological change demands boards evolve from reactive gatekeepers to proactive enablers, exercising what Teigland termed 'strategic foresight', looking three to six years ahead rather than focusing on current conditions. This represents a reconceptualization of board responsibility from validating strategies to shaping futures, from maintaining boundaries to enabling transformation.

Critically, participants distinguished between AI expectations and demonstrated business value, the 'expectation-reality gap' that emerged as the discussion's most pressing concern. Numerous pilots and substantial investments generate enthusiasm but struggle to deliver measurable financial impact. The root causes proved consistent: inadequate foundational infrastructure (particularly fragmented data architectures), insufficient change management, poor adoption driven by cultural resistance, and boards accepting vague answers when questioning where AI value appears in P&L statements. Before sophisticated AI applications can deliver returns, organisations must address fundamentals including data consolidation, semantic alignment across systems, integrated processes, and cultures genuinely ready for change.

The discussion yielded practical mechanisms: establish 'sandboxes' where teams experiment with emerging technologies outside normal governance constraints whilst maintaining regulatory compliance; create specialised advisory boards meeting quarterly with external experts, startup founders, and technologists to challenge organisational thinking without permanent appointments; elevate technology and talent considerations across the entire board agenda rather than confining them to specific items; define KPIs acknowledging the J-curve phenomenon where productivity temporarily declines before improving; and cultivate organisational cultures viewing change as opportunity rather than threat, requiring both curiosity to discover what works and empathy for people experiencing transformation.

Most fundamentally, boards must recognise that digital transformation will never be 'finished.' Technology evolves continuously, competitive dynamics shift relentlessly, and new challenges emerge persistently. Strategy becomes less about five-year blueprints and more about identifying decision triggers, maintaining strategic optionality, and building capabilities for continuous adaptation. As Saueressig observed, simultaneous disruptions, geopolitical, sectoral, technological, create unprecedented complexity yet offer boards the chance to demonstrate leadership genuinely shaping organisational futures. The question before boards is whether they will invest the time, attention, and resources necessary to evolve their own governance practices before competitive realities make such evolution involuntary.

The Productivity Paradox

The Tenfold Increase That Changed Nothing

Saueressig opened the discussion with a question that immediately captured everyone's attention: if enterprise application usage increased from 400 to 4,500 over two decades – a tenfold expansion – why haven't organisations realised proportional productivity improvements? This question frames what participants came to recognise as digital transformation's central paradox. The answer reveals uncomfortable truths about how organisations conceptualise and execute transformation initiatives.

Most organisations treat digital transformation as an IT-specific concern rather than a broader organisational imperative. Leadership teams procure tools, implement platforms, and deploy applications whilst wondering why business outcomes remain static. Yet transformation requires addressing fundamentals including data architecture quality and accessibility, semantic alignment across systems ensuring different applications communicate meaningfully, process integration eliminating functional silos, and – most critically – sustained changes to how people actually perform their work.

Professor Krcmar reinforced this view, emphasising that digital transformation invariably requires fundamental modifications to working practices and employee behaviours. This human dimension emerged as the session's central theme. Several participants shared experiences where sophisticated technological capabilities existed, but adoption lagged catastrophically. The pattern proved remarkably consistent: cultural resistance to new workflows, inadequate change management failing to build organisational readiness, and misalignment between tool capabilities and actual working practices combined to ensure expensive technology investments sat unused whilst employees defaulted to familiar approaches.

Europe's Competitive Disadvantage

The discussion evolved when Saueressig presented data on global AI adoption disparities. The statistics highlighted the scale of the issue: 75 per cent of US companies and 65 per cent of Chinese companies deploy AI productively in enterprise contexts, compared to merely 15 per cent of German companies. This represents not a temporary lag but a structural competitive disadvantage. European firms operate at one-fifth the AI deployment rate of American counterparts – a gap that compounds as network effects, data advantages, and organisational learning accumulate amongst early adopters.

This disparity raises existential questions European boards cannot defer. Can firms maintain competitive positions when five times less likely to leverage AI effectively than American rivals? When Chinese competitors combine 65 per cent adoption rates with state support for strategic industries? The answer depends substantially on whether European boards treat these statistics as wake-up calls demanding immediate action or merely interesting data points to monitor. Participants universally acknowledged that waiting for certainty before acting risks competitive obsolescence; the question became how boards could enable experimentation, learning, and scaling whilst maintaining appropriate governance.

Rethinking Board Governance for Digital Transformation

From Oversight to Strategic Foresight

Throughout the session, participants grappled with defining appropriate board engagement scope and depth in digital transformation. Traditional governance maintains clear boundaries: boards challenge strategy and approach but avoid prescribing implementation details, preserving the distinction between oversight and management execution. This conventional wisdom rests on stable environments where strategic horizons extend predictably and implementation represents tactical execution of approved plans.

However, the discussion revealed unanimous rejection of this traditional approach. Not a single participant defended maintaining historical governance boundaries in the face of technological disruption's pace and scale. Teigland articulated the emerging consensus: boards must exercise strategic foresight, continuously scanning three to six years ahead rather than focusing predominantly on current performance. This represents fundamental reconceptualization of board responsibility, from reactive oversight to proactive stewardship, from validating management-developed strategies to actively shaping organisational futures, from maintaining role boundaries to enabling transformation.

This evolution demands boards develop new capabilities and allocate time differently. Strategic foresight requires understanding emerging technologies, competitive dynamics, and business model innovations before they reach mainstream adoption. It necessitates challenging management not merely on execution against plans but on whether plans remain appropriate given shifting realities. Most fundamentally, it demands boards create environments where executive teams can navigate genuine uncertainty – providing support and direction when traditional strategic roadmaps prove inadequate rather than demanding certainty that cannot exist.

The Technical Expertise Challenge

A recurring concern centred on whether boards possess adequate technical expertise to provide meaningful oversight of AI strategies and digital transformation initiatives. This question admits no simple answer. Technology evolves faster than board composition can reasonably adjust; expecting every board to include members with cutting-edge AI expertise proves unrealistic. Yet boards lacking any technical depth struggle to distinguish genuine strategic insights from marketing presentations, assess feasibility of proposed initiatives, or understand trade-offs between competing technological approaches.

Participants shared creative solutions addressing this dilemma. Several organisations established specialised advisory boards focused on technology and AI, meeting quarterly to challenge strategic thinking. These bodies convene external experts, startup founders, academics, and practising technologists without requiring permanent board appointments. This model provides exposure to cutting-edge thinking whilst avoiding governance complications of adding numerous permanent seats. Others described rotating technology experts through board sessions, inviting digital innovators to specific meetings for focused challenge rather than ongoing participation.

The key insight emerging from these examples: boards need not make every member a technologist but must establish mechanisms reliably bringing technology expertise into deliberations. Whether through advisory boards, expert rotation, enhanced education for existing members, or some combination, boards require access to individuals who understand both technology capabilities and business strategy, can translate between technical and governance languages, and possess credibility challenging management assertions about feasibility, timing, and resource requirements.

Setting Strategic Focus

Focus emerged as a critical board responsibility insufficiently exercised. Confronted with proliferating technological opportunities, organisations naturally want to pursue everything simultaneously – investigating AI applications, exploring blockchain possibilities, evaluating quantum computing implications, assessing metaverse strategies, and addressing numerous other emerging capabilities. This diffusion of effort ensures mediocrity across initiatives rather than excellence in priority areas.

Teigland emphasised that boards must resist this temptation, establishing clear strategic priorities encompassing not only cost reduction but also revenue generation and business model innovation. One approach resonating with participants involves deliberately selecting three or fewer high-impact areas for concentrated investment rather than distributing resources across dozens of pilots. This prioritisation mindset recognises that with finite resources and complex transformation initiatives, attempting everything guarantees achieving nothing. Better to build genuine capability in limited domains than superficial familiarity across broad territory. This focus discipline represents one of boards' most valuable contributions – the willingness to make hard choices management teams, facing pressure from multiple constituencies, often struggle to make independently.

The AI Reality: Bridging Expectations and Outcomes

The Expectation-Reality Gap

The question keeping board members awake emerged clearly: how do we bridge the gap between AI expectations and what actually manifests in financial statements? Participants described a pattern experienced across industries and geographies: numerous pilots generating organisational enthusiasm, substantial investments approved with confident projections, genuine belief that AI will transform operations, yet when boards ask CFOs where value appears in P&L statements, answers remain frustratingly vague.

This disconnect between AI potential and demonstrated value creation emerged as the session's most pressing concern. The underlying causes proved disturbingly consistent. Organisations launch AI initiatives before addressing foundational prerequisites, particularly fragmented data architectures. They underinvest in change management, assuming technological superiority will drive adoption organically. They tolerate vague success metrics, accepting pilot 'learnings' rather than demanding measurable business outcomes. Most fundamentally, they separate AI strategy from business strategy, treating artificial intelligence as a capability to develop rather than a tool serving specific strategic objectives.

Closing this gap demands harder questions from boards, better-defined metrics tied to business outcomes rather than technical milestones, genuine accountability for implementation effectiveness, and honest acknowledgement that not every AI initiative will succeed. Boards should challenge management teams unable to articulate specifically how proposed AI investments will generate value, through what mechanisms, on what timeline, with what confidence level. Accepting enthusiasm as substitute for rigorous business cases has wasted substantial capital; boards must demand better.

Foundational Prerequisites

The discussion consistently returned to a fundamental realisation: before sophisticated AI applications can deliver value, organisations must address foundational elements. Success requires consolidated data architectures enabling information access across systems, semantic alignment ensuring different applications interpret data consistently, integrated processes eliminating functional silos that fragment operations, and organisational cultures genuinely ready for change rather than merely compliant with mandates.

Data emerged as particularly critical yet problematic. Multiple participants described organisational data scattered across dozens of systems, stored in incompatible formats, defined inconsistently across business units, and governed through fragmented processes preventing comprehensive access. This data fragmentation must be resolved before sophisticated AI applications can succeed, machine learning algorithms require quality training data, predictive models need comprehensive information, and automation depends on reliable inputs.

These acknowledgements prompted debate about prioritisation: should boards emphasise foundational data infrastructure investments over more visible AI initiatives? The consensus leaned decisively toward foundations. Whilst data consolidation projects lack the excitement of AI announcements, they represent essential prerequisites. Better to delay AI deployment until proper foundations exist than launch initiatives destined to fail because underlying infrastructure cannot

support them. This proves difficult advice for boards facing competitive pressure and stakeholder expectations, yet the alternative, funding initiatives lacking success prerequisites, wastes more resources whilst delaying necessary infrastructure work.

Accepting the J-Curve Reality

Teigland stressed an uncomfortable truth boards must accept: productivity often declines temporarily during transformation before subsequent improvement, the J-curve phenomenon. This pattern proves particularly pronounced in digital transformation where employees must simultaneously maintain current operations whilst learning new systems, processes, and working methods. Initial productivity drops as learning curves steep, workflow disruptions occur, and integration challenges manifest. Only after organisations navigate this difficult period does productivity begin improving, eventually surpassing pre-transformation levels.

This J-curve reality creates governance challenges. Stakeholders expect immediate returns on technology investments; quarterly earnings pressures discourage patience; and management teams face criticism for performance deterioration during transition periods. Yet refusing to accept the J-curve – demanding transformation occur without temporary productivity impacts – ensures superficial changes rather than fundamental transformation. Organisations avoid disruptive changes, minimise workflow modifications, and preserve existing processes whilst layering new technology atop them. This produces illusions of transformation without genuine change.

Leading practice involves explicitly documenting expected timelines in board materials, including anticipated dip periods and recovery trajectories. Participants described defining KPIs tracking both implementation progress and eventual value realisation, creating accountability whilst acknowledging transformation complexity. This transparency proves uncomfortable – boards dislike presenting stakeholders with projections showing performance deterioration before improvement – yet the alternative of overpromising and underdelivering proves far more damaging. Better to set realistic expectations and deliver against them than create disappointment through unrealistic optimism.

The Persistent Adoption Challenge

Even when technical implementation succeeds and foundational prerequisites exist, adoption challenges frequently prevent value realisation. Sophisticated AI tools sit unused as employees default to familiar workflows, automated processes get circumvented through manual workarounds, and new capabilities remain unexploited because organisations fail to modify behaviours exploiting them. This pattern reinforces that technology deployment alone does not constitute transformation; achieving sustained behaviour change at organisational scale represents the fundamental challenge. Without serious attention to change management – building organisational readiness, addressing legitimate employee concerns, providing adequate training and support, and creating incentives rewarding new behaviours – even excellent technology investments will disappoint.

Practical Mechanisms for Boards

Sandboxes for Controlled Experimentation

Organisations are establishing 'sandboxes', controlled environments where teams experiment with emerging technologies outside normal governance constraints whilst maintaining external regulatory compliance. These initiatives provide dedicated funding encouraging rapid experimentation, acceptance of failure, and accelerated learning. This approach balances innovation imperatives with prudent risk management, enabling capability exploration without jeopardising core operations. The key lies in clear boundaries: relaxed internal processes and approval chains within sandboxes but maintained adherence to legal, regulatory, and ethical requirements. This model allows organisations to develop new capabilities, test business model innovations, and build expertise without risking broader operational stability.

Technology and AI Advisory Boards

Specialised advisory boards focused on technology and AI emerged as increasingly common governance mechanisms. These bodies typically convene quarterly, assembling external experts, entrepreneurial founders, academics, and practising technologists to challenge organisational thinking. The model employs periodic engagement, usually two to three annual sessions, rather than permanent appointments. This approach yields multiple benefits: access to cutting-edge expertise that permanent board members may lack, external challenge to internal assumptions that homogeneous groups struggle to generate, and exposure to emerging technological trends before mainstream adoption. Challenges persist in identifying suitable advisors possessing both technical depth and business acumen, and ensuring substantive engagement rather than performative interactions, yet participants reported substantial value from well-structured advisory relationships.

Elevating Technology Across the Board Agenda

Technology and talent considerations must permeate the entire board agenda rather than remaining confined to specific items. Leading boards integrate digital considerations throughout strategy formulation, risk assessment, talent evaluation, and capital allocation decisions rather than treating technology an isolated consideration. This elevation signals organisational priority, ensures technology receives commensurate senior leadership attention, and prevents artificial separation between 'technology strategy' and 'business strategy' when these increasingly represent the same conversation. Participants emphasised that relegating technology discussions to agenda item eight, squeezed in if time permits, signals that digital transformation remains peripheral rather than central to organisational future.

Defining Human-Technology Boundaries

A fundamental question emerged that boards must address explicitly: which tasks should organisations delegate to AI systems, and which must remain human responsibilities? Achieving clarity about this human-technology boundary enables purposeful transformation, ensuring automation serves strategic objectives rather than proceeding merely because technological capability exists. Without such clarity, automation proceeds opportunistically based on technical feasibility rather than

strategic intent. Clear delineation ensures technology serves organisational objectives – enhancing human capabilities, eliminating genuinely tedious work, improving decision quality – rather than driving change for its own sake or optimising metrics disconnected from strategic purpose.

Cultural Transformation: From Burden to Opportunity

Professor Krcmar offered reframing that resonated throughout the session: organisations must cultivate cultures viewing change as opportunity rather than burden, embracing transformation rather than enduring it. This proves easier articulated than achieved. Legacy mindsets viewing change as threat generate resistance across organisational levels, from frontline employees fearing role obsolescence to middle managers protecting departmental prerogatives to senior leaders uncomfortable with unfamiliar technologies.

Two qualities emerged as essential for navigating transformation successfully: curiosity to discover what works and what does not, combined with empathy for individuals experiencing organisational change.

Organisations must balance driving progress with acknowledging legitimate employee concerns about role evolution, career trajectories, and skill relevance. This equilibrium between advancing transformation and recognising human dimensions proved crucial for maintaining organisational cohesion during substantial change periods.

Several participants described becoming more deliberate about creating space for experimentation whilst simultaneously acknowledging real concerns people harbour about transformation implications. This balance requires conscious effort. Natural organisational tendency leans toward either unfettered change that traumatises workforces or excessive caution that prevents necessary evolution. Navigating between these extremes demands boards and leadership teams maintain continuous dialogue, demonstrate genuine concern for employee welfare, invest in reskilling and transition support, yet refuse to allow change resistance to paralyse necessary transformation.

Leading Through Genuine Uncertainty

The discussion acknowledged fundamental ambiguity characterising digital transformation. Clear answers frequently remain elusive regarding which technologies will prove transformative, which business models will succeed, which competitors will emerge victorious. For boards habituated to evidence-based decision-making and transparent risk-return calculus, such ambiguity generates profound discomfort. Traditional governance emphasises rigorous analysis, comprehensive data, and confident projections – approaches ill-suited to environments where underlying assumptions may overturn within months.

Yet the alternative – deferring action pending clarity – poses competitive obsolescence risk. Early movers accumulate advantages through network effects, data accumulation, organisational learning, and market position establishment. Organisations waiting for certainty before acting discover that by the time clarity arrives, competitors have captured opportunities. The governance challenge centres on developing decision-making frameworks enabling action despite fundamental uncertainty whilst preserving appropriate oversight and risk management disciplines.

This demands boards create environments where executive teams can navigate ambiguity successfully, providing support and direction when traditional strategic roadmaps prove inadequate. Rather than demanding certainty that cannot exist, boards should focus on ensuring organisations maintain strategic optionality – preserving capability to pivot as conditions clarify – whilst building conviction about structural trends beneath daily volatility. Strategy becomes less about five-year blueprints and more about identifying decision triggers, maintaining flexibility, and developing adaptive capabilities.

Conclusion: Board Imperatives for Digital Transformation

The Board Agora discussion illuminated both the magnitude of challenges confronting contemporary boards and pathways toward effective response. Several themes deserve emphasis as boards chart courses through continuous technological disruption.

First, digital transformation remains fundamentally human and organisational rather than technological. The tenfold increase in enterprise applications has not yielded proportional productivity gains because technology deployment alone creates no value. Success requires aligned data architectures, integrated processes, cultural readiness, and sustained adoption. Boards must resist viewing transformation through purely technical lenses, instead ensuring human factors receive appropriate attention and investment. Without addressing cultural resistance, building change management capabilities, and achieving genuine behavioural shifts at scale, even excellent technology investments will disappoint.

Second, European companies face competitive imperatives demanding urgent action. The stark disparities in AI adoption – 75 per cent of US companies versus 15 per cent of German companies deploying AI productively – signal widening competitive gaps threatening European firms' long-term viability. Boards cannot afford to wait for certainty before acting; such delays ensure falling further behind competitors already accumulating advantages through early deployment. Instead, boards must create environments where organisations can experiment responsibly, learn systematically, and scale successful innovations rapidly.

Third, boards must expand roles beyond traditional oversight to active enablement. This includes exercising strategic foresight anticipating emerging trends rather than merely validating management proposals; setting clear focus preventing resource dispersion across excessive initiatives; ensuring adequate technical expertise through advisory boards or expert rotation; accepting J-curve realities that transformation may temporarily reduce productivity before generating gains; and elevating technology considerations across entire board agendas rather than confining them to discrete items. The elevated pace of change requires more engaged board participation than historical norms suggest.

Fourth, addressing foundational elements takes precedence over chasing latest technological trends. Before sophisticated AI applications deliver value, organisations must ensure data quality and accessibility, semantic alignment across systems, integrated processes eliminating silos, and cultures genuinely embracing change. Boards should challenge management teams to demonstrate these fundamentals receive proper attention rather than assuming new technologies

compensate for structural weaknesses. The unglamorous work of data consolidation, process integration, and change management enables everything else.

Fifth, sustainable transformation requires shifting from viewing change as burden to experiencing it as opportunity. Organisations cultivating curiosity and empathy – finding satisfaction in transformation rather than merely enduring it – prove far more successful achieving lasting change. Boards model this mindset through their own engagement with uncertainty and willingness to learn continuously. Creating cultures embracing change demands conscious effort, genuine concern for employee welfare, investment in transition support, yet refusal to allow resistance to paralyse necessary evolution.

Finally, transformation represents ongoing journey rather than destination. The notion that digital transformation will someday be 'finished' reflects outdated thinking. Technology continues evolving, competitive dynamics shift relentlessly, new challenges emerge persistently. Boards must embrace this reality, building organisational capabilities for continuous adaptation rather than optimising for static end states. Strategy becomes less about blueprints and more about maintaining strategic optionality, identifying decision triggers, and preserving capacity to pivot as conditions clarify.

Saueressig captured the moment's essence: simultaneous disruptions – geopolitical, sectoral, technological – create unprecedented complexity. Yet this convergence offers boards chances to demonstrate leadership genuinely shaping organisational futures. Success requires courage acting amid uncertainty, wisdom prioritising effectively, and humility recognising learning never ends. As Professor Krcmar noted: 'Easy is not exciting.' The challenges facing boards prove daunting, but they also offer satisfaction of navigating genuinely consequential change. For boards willing to engage deeply, learn continuously, and lead courageously, digital transformation presents not burdens to endure but opportunities to seize.

The question before boards is whether they will invest time, attention, and resources necessary to evolve their own governance practices – developing strategic foresight, building technical literacy, creating experimentation mechanisms, accepting ambiguity, and fostering transformation cultures – before competitive realities make such evolution involuntary. The organisations that thrive in coming decades will be those whose boards recognised transformation's imperative early and acted decisively to enable it.

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