

**Artificial Intelligence and Digital Transformation in Accounting Management: A Theoretical
Review of Emerging Trends, Opportunities Challenges and Future Directions**

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Abstract

Accounting and management scholarship frequently uses “digital transformation” as a synonym for adopting artificial intelligence (AI) and other advanced technologies, a usage this paper argues collapses a theoretically important distinction the broader information-systems literature has worked carefully to establish. Verhoef and colleagues distinguish digitization, the conversion of analog information into digital form, from digitalization, the use of digital technology to automate discrete existing processes, from digital transformation proper, a more fundamental reconfiguration of how an organization creates and captures value. This paper argues that a substantial share of what accounting and management research currently celebrates as AI-driven digital transformation is, on this more precise definition, actually digitalization: automation of existing processes at greater speed and scale, without the accompanying reconfiguration of value-creation logic that would justify the stronger label. Drawing on Vial's influential eight-building-block framework for digital transformation alongside recent evidence on AI adoption, decision-authority calibration, and organizational governance, the paper reviews emerging trends, opportunities, and challenges in AI-enabled accounting and management, and argues that Vial's original framework, like much of the subsequent literature, underweights the ethical and governance building block this paper's review suggests has become at least as consequential as the technological building blocks the framework more thoroughly develops. The paper proposes a revised model incorporating this governance layer explicitly, and closes with a research and practice agenda for closing the gap between AI-enabled digitalization, now well documented, and the genuine digital transformation accounting and management scholarship continues to promise.

Keywords: artificial intelligence; digital transformation; digitalization; accounting; management; organizational change; governance.

Introduction

Digital transformation has become one of the most frequently invoked phrases in contemporary accounting and management scholarship, applied with sufficient breadth that it now describes activities ranging from converting paper ledgers to electronic records, to automating routine transaction processing with robotic process automation, to genuinely reconceiving how an organization competes and creates value using data and algorithmic capability it did not previously possess. This

paper argues that treating these activities as points along a single, undifferentiated continuum obscures a distinction the broader information-systems literature has worked carefully to establish, and that this obscuring has practical consequences for how organizations plan, resource, and evaluate their own digital initiatives.

Verhoef, Broekhuizen, Bart, Bhattacharya, Dong, Fabian, and Haenlein (2021), synthesizing digital-transformation research across multiple business disciplines, identify three analytically distinct stages: digitization, the conversion of analog information into digital form; digitalization, the use of digital technologies to automate and improve existing processes without fundamentally altering them; and digital transformation proper, a more fundamental change in how an organization creates, delivers, and captures value, frequently requiring new business models rather than merely improved execution of existing ones. Vial (2019), conducting an independent, inductive review of 282 works on digital transformation, arrives at a compatible but differently structured account, proposing an eight-building-block framework in which digital technologies trigger disruptions, prompting strategic responses that produce structural changes, moderated throughout by organizational barriers, ultimately generating positive or negative performance outcomes.

This paper applies both frameworks to accounting and management specifically, arguing that **a substantial share of what current scholarship celebrates as AI-driven digital transformation in accounting and management is, on Verhoef et al.'s more precise three-stage definition, actually digitalization — the automation of existing processes at greater speed and scale — without the accompanying reconfiguration of value-creation logic that would justify the stronger transformation label, and that this terminological imprecision has practical consequences for how organizations plan and evaluate their digital initiatives.** The paper reviews emerging trends, opportunities, and challenges in AI-enabled accounting and management through the lens of Vial's building-block framework; argues that framework, like much subsequent literature, underweights an ethical and governance building block this paper's review suggests has become at least as consequential as the more thoroughly developed technological building blocks; and proposes a revised model incorporating this governance layer explicitly, closing with a research and practice agenda for closing the gap between well-documented digitalization and the more elusive genuine transformation the literature continues to promise.

The practical stakes of resolving this terminological imprecision extend beyond academic tidiness. Organizations making significant capital and personnel investments in AI initiatives typically justify those investments, at least in part, by reference to the strategic, business-model-level benefits genuine digital transformation promises — new revenue streams, fundamentally reimagined client relationships, durable competitive differentiation — rather than the more modest, if still valuable, efficiency benefits digitalization alone delivers. An organization that budgets, resources, and sets performance expectations around transformation-level benefits while its actual AI initiative is

proceeding at the digitalization stage risks a specific and consequential form of disappointment: the initiative may succeed entirely on its own terms while still falling well short of the strategic promise under which it was originally approved and funded, a gap this paper argues the field's current vocabulary does not equip organizations to anticipate or explain.

Digitization, Digitalization, and Transformation: Why the Distinction Matters

The practical stakes of Verhoef et al.'s (2021) three-stage distinction are not merely definitional. An organization that has successfully digitized its accounting records, converting paper-based ledgers into structured electronic databases, has accomplished something genuinely valuable but categorically different from an organization that has successfully digitalized its accounting function by automating reconciliation and reporting processes using robotic process automation, which is in turn categorically different from an organization that has undergone genuine digital transformation by restructuring its business model around data and analytical capability the organization did not previously possess — for instance, a traditional accounting firm reorganizing itself around continuous, AI-enabled advisory services rather than periodic, backward-looking compliance work.

This paper argues that conflating these three stages produces a specific and consequential measurement problem: an organization, or a research study, evaluating “digital transformation progress” without distinguishing which stage is actually being measured risks concluding that transformation is occurring simply because digitization or digitalization metrics are improving, when those metrics may say little about whether the organization's underlying value-creation logic has actually changed. Sutton, Holt, and Arnold (2016), tracing three decades of AI-and-accounting predictions, find the profession's actual encounter with AI has historically been more gradual and cumulative than repeated waves of transformation-focused commentary anticipated — a pattern this paper reads as consistent with an interpretation in which much of what earlier commentary called transformation was, in Verhoef et al.'s terms, actually digitalization proceeding steadily rather than genuine transformation arriving in the dramatic, discontinuous fashion the word “transformation” implies.

This measurement problem is compounded by a related terminological drift worth naming explicitly: because “digital transformation” carries considerably more strategic prestige within organizations than the more modest-sounding “digitalization” or “digitization,” internal project sponsors and external consultants alike face a structural incentive to describe digitalization-stage initiatives using transformation-stage language, independent of any deliberate misrepresentation. A chief financial officer seeking budget approval for an AI-enabled reconciliation automation project, a paradigmatic digitalization initiative in Verhoef et al.'s terms, may find that framing the project as “digital transformation of the finance function” secures more enthusiastic executive sponsorship than the more accurate but less compelling digitalization label would. This paper argues this incentive

structure, rather than any conceptual confusion on the part of individual practitioners or researchers, may be a significant independent driver of the terminological imprecision this paper has identified, a possibility with direct implications for how the research and practice agenda this paper proposes should actually be implemented.

Vial's Framework Applied to Accounting and Management

Digital Technologies and the Disruptions They Trigger

Vial's (2019) framework begins with digital technologies as the trigger of disruption, and this paper argues AI represents a digital technology capable of triggering disruption at every one of Verhoef et al.'s (2021) three stages simultaneously, a versatility that itself may partly explain why the three stages are so frequently conflated in applied accounting and management discourse. Ranta, Ylinen, and Järvenpää (2023), reviewing machine learning in management accounting research, document AI applications spanning routine transaction automation, which corresponds to digitalization in Verhoef et al.'s sense, through predictive analytics that reshape planning and forecasting practice, which begins to approach genuine transformation where it changes not merely how forecasts are produced but what kind of strategic conversation an organization has around them.

The disruption Vial's framework identifies is, in accounting and management contexts specifically, frequently a disruption to the profession's traditional task boundaries rather than to product markets or competitive structure in the sense digital transformation research more commonly examines. Choi and Xie (2026), documenting generative AI's effect inside real accounting workflows, find measurable reallocation of accountant time away from routine processing toward business communication and quality assurance — a disruption to task composition that Vial's framework would categorize as an early-stage trigger, with the strategic response and structural change stages, discussed next, determining whether that trigger ultimately produces genuine transformation or settles into a new, but still fundamentally similar, steady state of digitalized routine work.

This task-boundary framing has a specific implication for how Vial's disruption concept should be applied in accounting and management specifically, relative to the product-market disruption the concept more commonly describes in retail, media, or other consumer-facing industries Vial's original 282-work review draws substantially from. A retailer facing digital disruption typically confronts a genuinely external threat — new digital-native competitors, changing consumer channel preferences — that creates pressure to respond regardless of the retailer's own internal preferences. Accounting and management functions, by contrast, frequently generate their own disruption internally, through voluntary AI adoption decisions rather than external competitive pressure, since the professional-services and internal-function context in which accounting typically operates does not face the same direct, consumer-facing competitive exposure retail and media industries confront. This paper argues

this internally generated, rather than externally imposed, disruption pattern may itself help explain why accounting and management AI initiatives so often stall at the digitalization stage: the strategic urgency that externally imposed disruption creates, pushing organizations past digitalization toward the more difficult structural changes genuine transformation requires, is frequently absent or considerably weaker in accounting and management contexts specifically.

Strategic Responses and the Structural Changes They Require

Vial's (2019) framework treats strategic response as the pivotal stage determining whether a digital-technology-triggered disruption produces genuine transformation or is simply absorbed into existing organizational structures without fundamental change. This paper argues accounting and management functions have, on the evidence currently available, disproportionately pursued the more modest of these two paths. Rikhardsson and Yigitbasioglu (2018), reviewing business intelligence and analytics research in accounting specifically, find empirical coverage of how these tools actually change organizational decision-making and structure has historically lagged coverage of the tools' technical capabilities — evidence this paper reads as suggesting the strategic-response stage Vial's framework identifies as pivotal has received disproportionately less scholarly attention than the technology-adoption stage that precedes it.

This attentional imbalance in the research literature plausibly mirrors, rather than merely reflects, a comparable imbalance in organizational practice itself. An organization's technology-adoption decisions are typically made by, or with heavy input from, technology and finance functions whose evaluative frameworks favor measurable, near-term return on a specific system investment; the strategic-response and structural-change decisions Vial's framework identifies as the pivotal transformation stage typically require sustained engagement from senior leadership operating with a considerably longer time horizon and a considerably less measurable set of success criteria. This paper argues organizations whose AI governance remains concentrated within technology and finance functions, without correspondingly engaged senior-leadership involvement in the strategic-response stage specifically, are structurally predisposed toward the digitalization-stage outcomes this paper has argued characterize much of current practice, independent of how sophisticated the underlying AI technology those functions have adopted may be.

Where genuine strategic response and structural change have been documented, they tend to involve a redefinition of the accounting or management function's core value proposition rather than merely faster execution of its traditional one. Moll and Yigitbasioglu (2019), examining internet-related technologies' effect on accounting work more broadly, frame the profession's central challenge in terms directly compatible with Vial's structural-change stage: as automatable tasks shrink, the profession has to actively demonstrate what its distinctive human contribution now is, a demonstration requirement that, on this paper's reading, only becomes a genuine transformation trigger where an organization uses

it to reconfigure its actual service offering — shifting from compliance-oriented reporting toward continuous, judgement-intensive advisory work, for instance — rather than treating it as a purely rhetorical repositioning layered atop an otherwise unchanged operating model.

This distinction between genuine repositioning and rhetorical repositioning deserves a concrete illustration to avoid remaining purely abstract. An accounting firm that adopts AI-enabled continuous transaction monitoring and, on that basis, markets itself to clients as having shifted from periodic to continuous assurance has made a strategic response claim; whether that claim reflects genuine structural change, in Vial's sense, depends on whether the firm has correspondingly restructured its staffing model, billing arrangements, and client-relationship cadence to actually operate continuously, or whether the underlying engagement remains organized around the same periodic review cycle with an AI-enabled monitoring layer added on top without changing the engagement's fundamental temporal structure. This paper argues the second pattern, digitalization dressed in transformation language, is considerably more common in current practice than the first, based on the disproportion this paper has identified between the volume of transformation-labeled commentary and the comparatively thin body of evidence documenting genuine structural change of the kind this illustration describes.

Organizational Barriers and the Outcomes That Follow

Vial's (2019) framework identifies organizational barriers — resistance, legacy systems, structural inertia, skills gaps — as the factor moderating whether strategic response and structural change actually produce positive performance outcomes, and this paper argues accounting and management contexts present several barriers of unusual severity relative to other domains digital-transformation research has examined. Bou Reslan and Jabbour Al Maalouf (2024), surveying 454 accountants on AI's effect on their work, find skill dynamics changing alongside efficiency effects — evidence of exactly the skills-gap barrier Vial's framework identifies, with the specific accounting-relevant twist that many of the skills required for genuine transformation, rather than mere digitalization, concern judgement and advisory capability that traditional accounting training has not historically emphasized to the same degree as technical and compliance-oriented competency.

Legacy system constraints present a further, accounting-specific barrier this paper argues deserves particular emphasis. Accounting information systems, discussed extensively in the broader information-systems literature examining McCarthy's foundational resource-event-agent architecture, were frequently designed decades before contemporary AI capability existed, and organizations pursuing AI-enabled transformation while operating on these legacy architectures face a structural mismatch this paper's review suggests is under-examined relative to its practical significance: an AI system's analytical potential is bounded by the data architecture it operates upon, meaning legacy-system barriers in accounting contexts specifically constrain not merely implementation speed, the barrier Vial's framework most directly anticipates, but the ceiling on transformation genuinely

achievable regardless of how much implementation effort an organization applies.

This ceiling effect has a specific sequencing implication this paper argues deserves more attention than the applied literature currently gives it: an organization attempting genuine digital transformation, in Verhoef et al.'s (2021) sense, while its underlying accounting data architecture remains organized around legacy, siloed structures is, in effect, attempting to build the third stage of a three-stage process without having adequately completed the first. This paper argues organizations should treat data-architecture modernization as a necessary, sequenced prerequisite to transformation-stage ambition rather than a parallel workstream that can proceed independently, since the alternative — pursuing transformation-level strategic and structural change atop a data architecture that cannot actually support it — risks producing exactly the kind of aspirational, rhetoric-heavy transformation claim this paper has argued characterizes much current practice, without the underlying technical foundation needed to make that claim genuinely feasible.

Emerging Trends: Where Accounting and Management currently Sit

Several trends emerge consistently across the recent literature this paper has reviewed, each mapping onto a specific point in the Vial-and-Verhoef-combined framework this paper has developed. First, generative AI adoption is proceeding rapidly at the digitalization stage — automating drafting, summarization, and routine analytical tasks — while genuine business-model-level transformation remains considerably rarer and more contested, consistent with this paper's central argument that the two stages are being conflated in applied discourse more than they are actually being achieved together in practice. Second, the accounting and management functions reporting the clearest transformation-stage progress, rather than digitalization-stage progress alone, tend to be those that have explicitly redefined their value proposition around continuous, forward-looking advisory work rather than periodic, backward-looking reporting — a pattern consistent with Moll and Yigitbasioglu's (2019) demonstration-requirement framing discussed above.

Third, and this paper argues most significantly, the governance and ethical infrastructure surrounding AI-enabled accounting and management has emerged as a distinct, increasingly consequential trend in its own right, separate from the technology-adoption and organizational-structure trends Vial's original framework more directly anticipates. Kim, Glaeser, Hillis, Kominers, and Luca (2024), documenting a pattern in which officials retaining override authority over algorithmic recommendations exercised that authority inconsistently and without adequate documentation, illustrate a governance concern this paper argues is emerging as a genuinely distinct trend line within the broader AI-and-accounting literature, rather than a subsidiary consideration folded into the technology-adoption trend it is more commonly discussed alongside.

A fourth trend, less frequently named explicitly in the applied literature but visible across the evidence this paper has reviewed, concerns a growing bifurcation between organizations pursuing AI adoption as a cost-reduction exercise and organizations pursuing it as a genuine capability-building

exercise, with the two paths producing measurably different trajectories along Verhoef et al.'s (2021) three stages even where both begin from comparable initial technology investments. Organizations in the first category, this paper's review suggests, tend to plateau at the digitalization stage once the readily achievable efficiency gains have been captured, since cost-reduction framing does not naturally generate the strategic-response and structural-change activity Vial's framework identifies as necessary for further progression. Organizations in the second category, by contrast, appear more likely to continue investing in the organizational-capability and governance infrastructure this paper has argued genuine transformation requires, precisely because their initial framing already anticipated that AI adoption was about more than immediate cost savings. This paper treats this bifurcation as a trend meriting closer empirical attention than it has so far received.

Opportunities: What the Evidence Supports Confidently

The evidence supporting AI's contribution to accounting and management opportunity is, at the digitalization stage specifically, now substantial and consistent across multiple independent literatures. Ding, Lev, Peng, Sun, and Vasarhelyi (2020) demonstrate machine-learning accounting estimates outperforming reported managerial estimates in the majority of cases examined; Bao, Ke, Li, Yu, and Zhang (2020) demonstrate substantial fraud-detection accuracy gains over established benchmark models; Choi and Xie (2026) document measurable efficiency gains and time-reallocation inside real accounting workflows. This paper reads this body of evidence as establishing, with reasonable confidence, that AI-enabled digitalization of accounting and management processes delivers genuine, measurable value — a conclusion this paper does not dispute even as it argues the value delivered should be labeled accurately as digitalization benefit rather than assumed to constitute transformation.

It is worth pausing on why this digitalization-stage evidence base has grown so much more rapidly and so much more rigorously than the transformation-stage evidence this paper's subsequent discussion finds comparatively sparse. Digitalization-stage outcomes — processing time, error rates, detection accuracy — are considerably easier to define, measure, and compare across studies than transformation-stage outcomes, which require researchers to establish that an organization's underlying value-creation logic has genuinely changed, a considerably more interpretive and harder-to-standardize judgement than a processing-time comparison. This paper argues this methodological asymmetry, rather than any difference in how common digitalization versus transformation actually are in practice, may itself partly explain the evidence gap this section identifies — a possibility that does not undermine this paper's central argument but does suggest the field's evidentiary imbalance reflects methodological convenience as much as underlying organizational reality.

At the genuine transformation stage, the evidence is considerably thinner but not absent. Song, Mi, Bian, Tu, and He (2025), examining AI adoption's effect on corporate ESG performance across a large panel of Chinese listed firms, find AI-policy exposure improving ESG outcomes partly through digital-

transformation and green-innovation mechanisms that involve genuine reconfiguration of organizational processes around sustainability objectives, rather than mere automation of existing sustainability reporting — evidence this paper reads as a documented instance of Vial's transformation-stage outcome actually being achieved, distinguishable from the more common digitalization-stage evidence this section has otherwise reviewed. This paper argues the relative scarcity of comparable transformation-stage evidence elsewhere in the accounting and management literature is itself informative, suggesting genuine transformation remains considerably less common in practice than the frequency with which the word appears in applied commentary would suggest.

This scarcity is worth situating against the base rate implied by Vial's (2019) own review, which found the majority of the 282 works informing the framework's development concentrated at the strategic-response and structural-change stages of the framework rather than documenting fully realized, outcome-stage transformation — suggesting the scarcity this paper has identified in accounting and management specifically may reflect a broader pattern across digital-transformation research generally, rather than a peculiarity of the accounting and management literature alone. This paper reads this broader pattern as lending additional credibility to its central claim: if genuine, outcome-stage transformation is comparatively rare even in the digital-transformation literature's home disciplines, the presumption that accounting and management AI initiatives have achieved this considerably more demanding standard, simply because they involve sophisticated AI technology, deserves the same scrutiny this paper has applied throughout.

Challenges: Where the Evidence Is More Mixed

Krakowski, Luger, and Raisch (2023), extending resource-based theory to AI adoption through a controlled study of competitive chess, find AI adoption's value depends substantially on a specific, gradually developed skill of human-AI interaction rather than on the underlying technology's raw capability alone — a finding this paper reads as identifying a genuine challenge for organizations attempting to move from digitalization toward transformation, since this human-AI interaction skill is plausibly exactly the organizational capability Vial's framework identifies as necessary to convert a digital-technology-triggered disruption into a successful structural change rather than a barrier-constrained partial adoption.

Raisch and Krakowski (2021), whose automation-augmentation paradox has informed a considerable share of the broader AI-and-management literature, add a further challenge this paper treats as directly relevant to the digitalization-versus-transformation distinction: automation and augmentation are not independent choices but interdependent tensions, meaning an organization that pursues AI-enabled digitalization aggressively, automating an increasing share of existing processes, may find its capacity for the augmentation-oriented, judgement-intensive work genuine transformation requires correspondingly eroded, rather than freed up as the more optimistic applied literature

sometimes assumes. This paper reads this paradox as offering a partial theoretical explanation for why digitalization and transformation are so frequently conflated in practice: an organization pursuing digitalization aggressively may experience this pursuit as transformation-adjacent activity, without the paradox's own logic ensuring that pursuit actually builds, rather than depletes, the organizational capacity genuine transformation additionally requires.

This depletion risk carries a specific practical warning this paper argues deserves emphasis alongside the more straightforwardly positive efficiency evidence reviewed in the preceding section: an organization measuring its digital-transformation progress purely through digitalization-stage efficiency metrics — processing time reduced, headcount redeployed, error rates lowered — risks missing exactly the augmentation-capacity erosion Raisch and Krakowski's paradox predicts, since these efficiency metrics can continue improving even as the organization's capacity for the judgement-intensive, augmentation-oriented work genuine transformation requires is quietly declining. This paper argues organizations should accordingly track augmentation-relevant indicators — time spent on genuinely novel client problems, frequency of judgement calls escalated for senior review, breadth of advisory services actually delivered — as a deliberate counterweight to the efficiency metrics that dominate current digitalization-stage reporting, precisely because the paradox this section has reviewed suggests these two categories of metric can move in opposite directions even while an organization's overall AI investment continues to grow.

Mikalef and Gupta (2021), distinguishing AI technology from AI capability more broadly, find it is capability — technology combined with human skill and organizational routine — rather than technology alone that predicts organizational performance and creativity, a distinction this paper reads as summarizing the core challenge running through this section: the technological building block in Vial's framework is, on current evidence, comparatively well developed and well supported, while the organizational-capability and structural-change building blocks that would convert that technology into genuine transformation remain considerably less developed, creating exactly the gap between digitalization progress and transformation progress this paper has argued the accounting and management literature has not adequately named.

This capability-technology distinction, applied across the full set of challenges this section has reviewed, suggests a unifying diagnosis worth stating explicitly before this paper turns to its proposed governance extension: every challenge this section has examined — the human-AI interaction skill Krakowski et al. (2023) identify as slow to develop, the automation-augmentation depletion risk Raisch and Krakowski (2021) theorize, the capability-over-technology gap Mikalef and Gupta (2021) document — describes a version of the same underlying pattern, in which organizational capability development lags technology adoption considerably more than the applied literature's transformation-saturated vocabulary acknowledges. This paper treats this recurring pattern as the strongest evidence available that the digitalization-transformation distinction this paper has argued for is not merely a

definitional nicety, but a description of where the field's genuine, unresolved difficulty actually lies.

Ethics as the Building Block Vial's Original Framework Underweighted

Vial (2019) explicitly identifies accounting for ethical issues as an important avenue for future research in the framework's own concluding research agenda, an acknowledgment this paper reads as evidence that Vial's original eight-building-block structure, developed primarily from a 2019-era literature review, did not yet have adequate material to build ethics into the framework's core structure the way this paper argues subsequent evidence now warrants. Dwivedi and colleagues, addressing generative AI's risks and governance challenges across disciplines more broadly, find accountability and bias persisting as unresolved concerns even as adoption accelerates — evidence, several years after Vial's original publication, that the ethical and governance considerations Vial flagged as a future research priority have become a central, rather than peripheral, feature of how AI-enabled digital transformation actually unfolds in practice.

This paper argues the governance and ethics building block this section proposes adding to Vial's framework does not operate as an additional, parallel building block alongside the original eight, but as a moderating condition running through the strategic-response and structural-change stages specifically — determining, in effect, whether an organization's strategic response to AI-triggered disruption produces the kind of accountable, defensible structural change capable of sustaining genuine transformation, or instead produces a structural change vulnerable to the kind of governance failure this paper's companion literature on algorithmic decision authority has documented in adjacent contexts. An organization that pursues aggressive digitalization and even genuine structural transformation without correspondingly building this governance capacity is, on this paper's account, pursuing a transformation trajectory that remains fragile regardless of how sophisticated its underlying technology or how genuine its structural change might otherwise be.

This fragility has a specific temporal signature worth naming: governance-deficient transformation, on this paper's account, is not necessarily distinguishable from well-governed transformation in the short run, since both can produce comparable efficiency gains and even comparable structural changes to organizational processes while the underlying accountability infrastructure remains undeveloped. The distinction becomes visible only when something goes wrong — a biased output surfaces, a privacy violation is discovered, an unexplainable decision is challenged — at which point governance-deficient transformation, this paper argues, is considerably more likely to unravel in the manner the Robodebt and SyRI cases documented in the adjacent public-sector automated decision-making literature illustrate, than to absorb the failure and continue functioning. This paper accordingly argues that evaluating digital-transformation maturity purely against current-state performance metrics, without separately assessing this governance fragility, systematically overstates how durable a given organization's transformation achievement actually is.

A Revised Model for AI-Driven Digital Transformation in Accounting and Management

Bringing the preceding sections together, this paper proposes a revised model in which Verhoef et al.'s (2021) three stages — digitization, digitalization, and transformation — map onto Vial's (2019) building-block sequence, with an explicit governance and ethics layer added as this paper's central theoretical contribution, positioned between the strategic-response stage and the outcomes that stage ultimately produces. Figure 1 summarizes this model, distinguishing the genuine-transformation trajectory this paper's evidence suggests remains comparatively rare from the stalled-at-digitalization trajectory this paper argues characterizes a larger share of current AI-enabled accounting and management practice than the field's own transformation-focused vocabulary typically acknowledges.

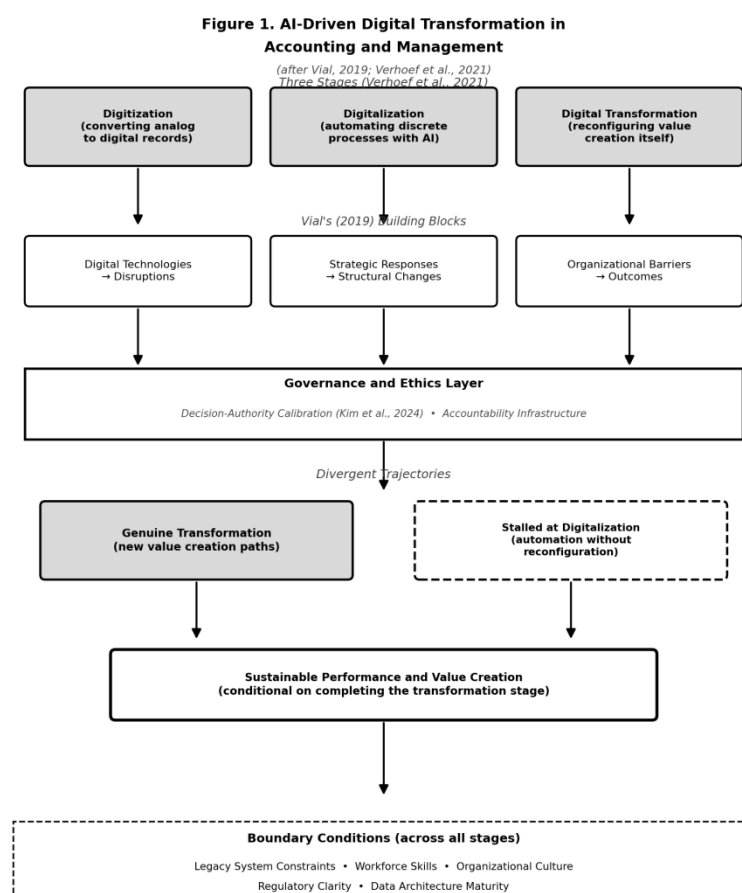


Figure 1. AI-Driven Digital Transformation in Accounting and Management, showing Verhoef et al.'s (2021) three stages mapped onto Vial's (2019) building blocks, filtered through a governance and ethics layer toward divergent transformation trajectories.

This model's central implication is diagnostic: an organization, or a research study, seeking to evaluate genuine digital-transformation progress in accounting and management should explicitly locate current practice along Verhoef et al.'s three stages before applying the transformation label, and

should separately assess whether the governance layer this paper has proposed adding to Vial's framework is developed enough to sustain whatever structural change has actually been achieved. This two-part diagnostic — which stage, and how well governed — offers considerably more analytical purchase than the undifferentiated question of whether an organization has “digitally transformed,” which this paper's review suggests has become sufficiently overused to have lost much of its original diagnostic value.

This paper's revised model also clarifies a specific point of theoretical continuity with Vial's (2019) original framework that is worth making explicit, since this paper's contribution is best understood as an extension rather than a rejection of Vial's underlying approach. Vial's own concluding research agenda explicitly names ethical issues as a priority for future digital-transformation research, and this paper's governance-layer addition can accordingly be read as directly answering the call Vial's original 2019 publication issued, using evidence that has accumulated specifically in the intervening years across the algorithmic-accountability, decision-authority, and AI-governance literatures this paper has drawn upon throughout. This paper's model is offered, in this sense, as a demonstration of exactly the kind of theoretical development Vial's framework anticipated needing, rather than as a competing alternative framework developed independently of Vial's foundational contribution.

Charting a Research and Practice Agenda

For accounting and management researchers, this paper's central terminological argument suggests future empirical work should explicitly specify which of Verhoef et al.'s (2021) three stages a given study actually examines, rather than defaulting to the more marketable but less precise “digital transformation” label regardless of which stage the study's evidence actually speaks to. Studies documenting efficiency gains from AI-enabled process automation should be described as digitalization research; the label “transformation” should be reserved for studies documenting genuine business-model or value-creation-logic change, a considerably higher evidentiary bar this paper argues the field should apply more consistently than it currently does.

For accounting and management practitioners, this paper's model suggests organizations should conduct an explicit internal audit of where their own AI initiatives actually sit along Verhoef et al.'s three stages, resisting the temptation to describe digitalization-stage automation projects using transformation-stage language in internal or external communication. This paper's governance-layer addition further suggests organizations should evaluate their AI governance maturity as a distinct workstream running alongside, rather than subordinate to, their technology-adoption roadmap, given this paper's argument that governance capacity determines whether structural change, once achieved, proves durable or remains vulnerable to the kind of compounding failure documented in adjacent public-sector automated decision-making contexts.

For organizations specifically considering whether to pursue transformation-stage ambition

rather than remaining at the digitalization stage by deliberate choice, this paper's model suggests the decision should be treated as a genuine strategic choice rather than a default trajectory every AI initiative should automatically pursue. Not every accounting or management function requires business-model-level reconfiguration to deliver substantial value; a function that has genuinely and durably improved its efficiency, accuracy, and governance at the digitalization stage has achieved something real and defensible, and this paper's terminological argument should not be read as implying that digitalization-stage achievement is somehow a lesser or incomplete outcome. The practical question this paper's model poses is not whether an organization has reached the transformation stage, but whether the organization has accurately identified which stage it occupies and has built the governance capacity appropriate to that stage, whichever stage it turns out to be.

For professional bodies and standard-setters, this paper's review suggests continuing education and certification requirements should explicitly address the digitization-digitalization-transformation distinction, equipping practitioners to identify accurately which stage a given organizational AI initiative has actually reached rather than accepting transformation-stage claims at face value. This paper argues this diagnostic literacy is itself a form of the professional judgement accounting and management practitioners are increasingly called upon to exercise as AI capability continues to advance, and one the field's current terminological imprecision has not adequately supported.

For journal editors and reviewers specifically, this paper's argument carries a direct implication for how submitted manuscripts describing AI-enabled organizational change should be evaluated: reviewers should explicitly ask authors to justify the specific stage-level claim their manuscript's title and framing make, requiring evidence commensurate with that claim's ambition rather than accepting transformation-level framing supported only by digitalization-level evidence. This paper argues this reviewing discipline, applied consistently across the accounting and management journals where this literature is published, would do more to correct the terminological imprecision this paper has identified than any single theoretical intervention, including this paper's own, could accomplish on its own — since scholarly publishing's own evaluative standards are, in the end, what ultimately determines which vocabulary becomes established field practice and which remains a minority position argued for but not widely adopted.

Where this Leaves the Field

Artificial Intelligence has, on the evidence this paper has reviewed, delivered genuine and increasingly well-documented value to accounting and management practice, and this paper has not argued otherwise. What this paper has argued is that a meaningful share of this documented value belongs, on Verhoef et al.'s (2021) more precise definitional terms, to digitalization rather than to the more ambitious digital transformation the field's applied vocabulary routinely claims, and that this terminological imprecision has practical consequences for how organizations plan, resource, and evaluate their own AI initiatives. Vial's (2019) building-block framework, extended in this paper with

the governance and ethics layer the framework's own original research agenda anticipated but did not yet incorporate, offers a more precise diagnostic vocabulary than the undifferentiated transformation language currently dominant in applied accounting and management discourse.

This paper closes by acknowledging a tension in its own argument worth naming directly: precision of vocabulary, of the kind this paper has advocated throughout, is itself unlikely to be adopted by organizations facing the structural incentive this paper has identified to describe digitalization-stage achievement in more prestigious transformation-stage language. This paper's contribution is accordingly offered primarily to the research community responsible for evaluating and reporting on organizational AI initiatives, in the hope that more precise scholarly vocabulary, consistently applied, can gradually discipline the more imprecise applied vocabulary this paper has argued has become sufficiently diluted to require exactly this kind of theoretical reconstruction. Whether that discipline actually takes hold, or whether “digital transformation” continues to be applied as loosely in accounting and management scholarship a decade from now as this paper has argued it currently is, remains an open empirical question the field's own future practice will answer.

The practical and theoretical implication is the same: accounting and management researchers, practitioners, and professional bodies should retire the practice of describing any and all AI-enabled process improvement as digital transformation, and adopt instead the more demanding, more diagnostically useful question this paper's revised model makes explicit — **at which of the three stages does a given AI initiative actually sit, and has the governance infrastructure needed to sustain whatever structural change has been achieved actually been built alongside it?** The evidence reviewed in this paper suggests most current AI-enabled accounting and management practice remains at the digitalization stage, with governance infrastructure lagging even that more modest achievement in many organizations — a finding considerably less dramatic than the field's own transformation-saturated vocabulary suggests, but one this paper argues offers a more accurate, and ultimately more useful, foundation for the research and practice agenda still ahead.

References

- Bao, Y., Ke, B., Li, B., Yu, Y. J., & Zhang, J. (2020). Detecting accounting fraud in publicly traded U.S. firms using a machine learning approach. *Journal of Accounting Research*, 58(1), 199–235. <https://doi.org/10.1111/1475-679X.12292>
- Bou Reslan, F., & Jabbour Al Maalouf, N. (2024). Assessing the transformative impact of AI adoption on efficiency, fraud detection, and skill dynamics in accounting practices. *Journal of Risk and Financial Management*, 17(12), Article 577. <https://doi.org/10.3390/jrfm17120577>
- Choi, J. H., & Xie, C. L. (2026). Human + AI in accounting: Early evidence from the field. *Journal of Accounting Research*, 64(3), 1333–1373. <https://doi.org/10.1111/1475-679X.70052>
- Ding, K., Lev, B., Peng, X., Sun, T., & Vasarhelyi, M. A. (2020). Machine learning improves

- accounting estimates: Evidence from insurance payments. *Review of Accounting Studies*, 25(3), 1098–1134. <https://doi.org/10.1007/s11142-020-09546-9>
- Dwivedi, Y. K., Kshetri, N., Hughes, L., Slade, E. L., Jeyaraj, A., Kar, A. K., Baabdullah, A. M., Koohang, A., Raghavan, V., Ahuja, M., Albanna, H., Albashrawi, M. A., Al-Busaidi, A. S., Balakrishnan, J., Barlette, Y., Basu, S., Bose, I., Brooks, L., Buhalis, D., ... Wright, R. (2023). Opinion paper: “So what if ChatGPT wrote it?” Multidisciplinary perspectives on opportunities, challenges and implications of generative conversational AI for research, practice and policy. *International Journal of Information Management*, 71, Article 102642. <https://doi.org/10.1016/j.ijinfomgt.2023.102642>
- Kim, H., Glaeser, E. L., Hillis, A., Kominers, S. D., & Luca, M. (2024). Decision authority and the returns to algorithms. *Strategic Management Journal*, 45(4), 619–648. <https://doi.org/10.1002/smj.3569>
- Krakowski, S., Luger, J., & Raisch, S. (2023). Artificial intelligence and the changing sources of competitive advantage. *Strategic Management Journal*, 44(6), 1425–1452. <https://doi.org/10.1002/smj.3387>
- Mikalef, P., & Gupta, M. (2021). Artificial intelligence capability: Conceptualization, measurement calibration, and empirical study on its impact on organizational creativity and firm performance. *Information & Management*, 58(3), Article 103434. <https://doi.org/10.1016/j.im.2021.103434>
- Moll, J., & Yigitbasioglu, O. (2019). The role of internet-related technologies in shaping the work of accountants: New directions for accounting research. *The British Accounting Review*, 51(6), Article 100833. <https://doi.org/10.1016/j.bar.2019.04.002>
- Raisch, S., & Krakowski, S. (2021). Artificial intelligence and management: The automation-augmentation paradox. *Academy of Management Review*, 46(1), 192–210. <https://doi.org/10.5465/amr.2018.0072>
- Ranta, M., Ylinen, M., & Järvenpää, M. (2023). Machine learning in management accounting research: Literature review and pathways for the future. *European Accounting Review*, 32(3), 607–636. <https://doi.org/10.1080/09638180.2022.2137221>
- Rikhardsson, P., & Yigitbasioglu, O. (2018). Business intelligence & analytics in management accounting research: Status and future focus. *International Journal of Accounting Information Systems*, 29, 37–58. <https://doi.org/10.1016/j.accinf.2018.03.001>
- Song, Y., Mi, L., Bian, Z., Tu, W., & He, J. (2025). How does artificial intelligence impact corporate ESG performance? The catching-up effect of digital technological innovation. *Journal of Innovation & Knowledge*, 10(6), Article 100843. <https://doi.org/10.1016/j.jik.2025.100843>
- Sutton, S. G., Holt, M., & Arnold, V. (2016). “The reports of my death are greatly exaggerated”—Artificial intelligence research in accounting. *International Journal of Accounting*

- Information Systems*, 22, 60–73. <https://doi.org/10.1016/j.accinf.2016.07.005>
- Verhoef, P. C., Broekhuizen, T., Bart, Y., Bhattacharya, A., Dong, J. Q., Fabian, N., & Haenlein, M. (2021). Digital transformation: A multidisciplinary reflection and research agenda. *Journal of Business Research*, 122, 889–901. <https://doi.org/10.1016/j.jbusres.2019.09.022>
- Vial, G. (2019). Understanding digital transformation: A review and a research agenda. *The Journal of Strategic Information Systems*, 28(2), 118–144. <https://doi.org/10.1016/j.jsis.2019.01.003>