

AND Digital

The Build Layer: An honest case for AI-augmented software delivery

A Strategic Case Paper by
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A companion paper to *AI's Next Frontier* and *The Trust Imperative*

The productivity gains from AI-augmented software delivery are real and measurable. They are also widely overstated, often by an order of magnitude. The gap between what AI-augmented teams can produce and what enterprises actually realise from them is what this paper is about. Closing it is what separates the organisations that compound AI value from those that absorb it as friction.

This is the third in a series on enterprise AI. Where the companion paper, *The Trust Imperative*, set out how to govern autonomous AI systems once deployed, this paper applies the same principle one layer earlier: to the software that AI is now helping to build.



The mirror and the multiplier

Two narratives compete for senior attention. The first is loud and increasingly ambitious: AI is a revolution in software development, with leading analyses pointing to productivity gains of ten or twenty times, 24-hour delivery models, and the prospect of small teams supervising fleets of agents that deliver entire applications. The second is quieter and more measured: most organisations adopting AI see the gains absorbed before they reach the bottom line, and the deciding factor is the system around the AI rather than the AI itself. Both are credible. An honest case sits between them, and it is the more useful place to stand.

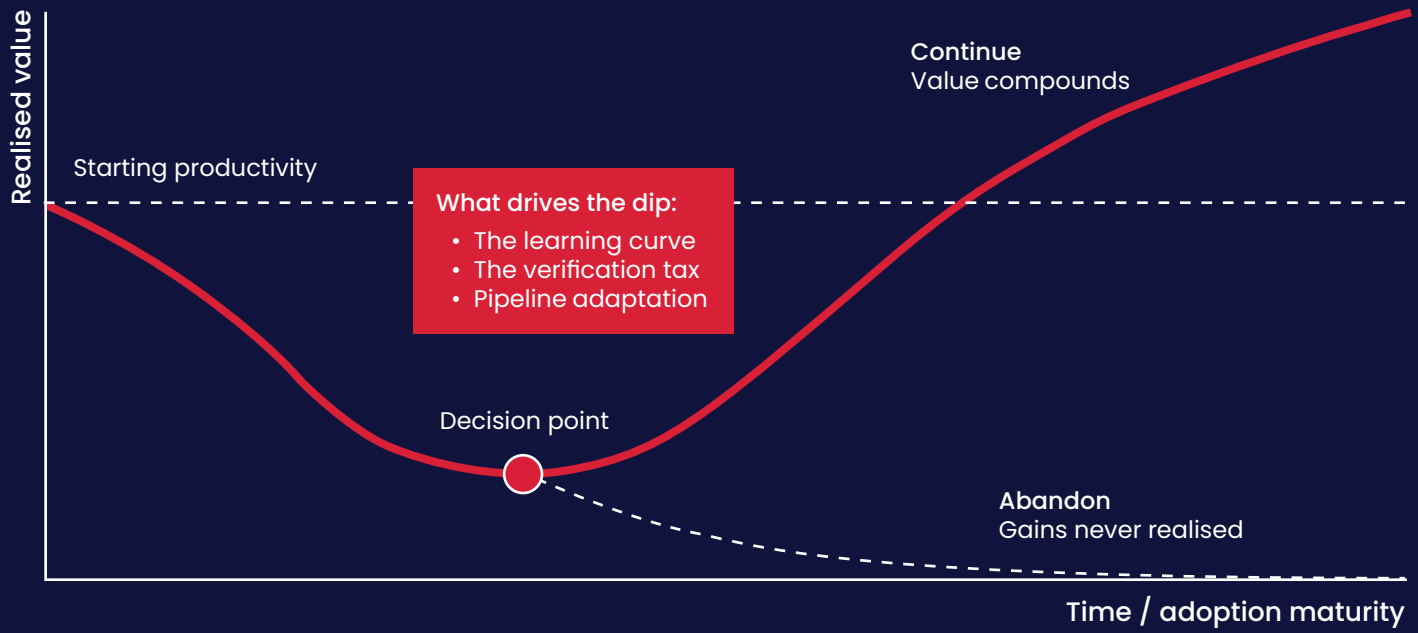
DORA's ROI of AI-assisted Software Development[1] report, published in Spring 2026, makes the point that anchors the measured view. AI serves as an amplifier in software development. It magnifies the strengths of high-performing organisations and the dysfunctions of struggling ones. The greatest returns on AI investment come not from the tools themselves but from a strategic focus on the underlying organisational system: the quality of the internal platform, the clarity of workflows, and the alignment of teams. Without that foundation, AI creates localised pockets of productivity that don't scale.

The same report introduces a useful structural concept: the J-Curve of AI value realisation. Most organisations adopting AI-augmented delivery encounter a temporary productivity dip and a period of instability as teams navigate a learning curve, the cost of verifying AI output, and the work of adapting their pipelines. The dip is the tuition cost of transformation. It is not a signal of failure but a necessary investment in learning and adaptation.

The dramatic productivity numbers that circulate in vendor narratives (50% faster, 70% faster, 10x productivity) are typically drawn from controlled experiments on isolated tasks. Research analysing tens of thousands of engineers, cited in the same DORA report, finds that AI yields a 35 to 40% productivity gain on simple, greenfield tasks but only 10% or less on complex, legacy, brownfield code. Most enterprise software development sits in the latter context, not the former. The honest position for senior leaders is that the technology is mature enough to deliver meaningful value, the conditions to extract that value are demanding, and most of those conditions are conditions an organisation builds rather than buys.

The J-curve of AI value realisation

Realised value dips before it rises. The dip is the decision point.



Where the gains are real

AI augmentation pays off where it compresses routine processes and amplifies human judgement, with governance integrated into the rhythm of how work moves. Discovery work, the structured process of moving from a business problem to a defined solution architecture, illustrates the pattern clearly. Discovery has historically run on weeks of workshops, document drafting, stakeholder interviews, and iterative refinement. AI augmentation collapses much of that elapsed time: discovery that traditionally took eight to ten weeks can be done in three to four when AI is applied to the routine work of interrogation, synthesis, and grounding. The compression matters less than what it enables. A working solution architecture emerges before commitment fatigue sets in. The architecture is grounded in evidence the AI surfaces rather than in the assumptions of whoever happened to be in the room. The strategic conversation has more time, and more material to work with.

The structural pattern is consistent across phases. AI handles the interrogation of source material, the simulation of solution alternatives, the grounding of recommendations against evidence and constraint. Humans hold the workshops, make the trade-offs, validate the proposals, own the decisions. Each phase passes through a human-driven validation gate before the next begins. The principle that runs through *The Trust Imperative* applies here directly: governance is enforced at the moment work happens, not the moment work is reviewed.

Re-reading Agile in the agentic era

The Agile Manifesto has anchored software delivery for twenty-five years. Read in the light of AI augmentation, its four principles describe a world that no longer entirely exists and a world that is partially being restored. The shifts are worth naming.

1. Individuals and interactions over processes and tools.

AI now absorbs much of the routine process and tool overhead that used to consume a team's time. Distributed context, automated handoffs, and instant synthesis of prior decisions free people to spend more of their attention on the interactions that produce judgement and direction. This principle is, paradoxically, strengthened by AI rather than weakened by it.

2. Working software over comprehensive documentation.

AI changes the trade-off rather than the priority. Working software remains the measure of progress. But the historical tension with documentation softens, because AI generates documentation as a byproduct of producing the software rather than as a separate effort. The choice is no longer either-or.

3. Customer collaboration over contract negotiation.

AI augments the prototypes and walkthroughs that make collaboration concrete. Richer mock-ups, faster scenario modelling, and clearer translation between technical and business framing reduce the distance between what the customer says and what the team builds. The contract becomes a starting point for collaboration rather than a substitute for it.

4. Responding to change over following a plan.

This is where AI shifts the assumptions most. The cost of changing direction falls when AI compresses the work of rebuilding plans, redrafting specifications, and re-implementing affected code. Small, safer increments become economically rational at a frequency that was previously unaffordable. The principle holds; the cadence at which it can be lived is faster.

Agile's underlying intent, that software development is fundamentally social, iterative, and adaptive, is reinforced by AI augmentation rather than displaced by it. What changes are the mechanics. Ceremonial Agile, with its sprint planning, retrospectives, daily standups, and story-point estimation, was built for a world in which human cognition was the throughput-limiting resource. When that ceases to be true, the ceremonial structure becomes overhead rather than enabler. The question is not whether Agile survives the agentic era; the question is what survives of Agile as the ceremonial scaffolding is rebuilt.

What determines whether you capture the value?

The same AI tools, deployed by two organisations of comparable size and sector, produce dramatically different outcomes. The variation is not coincidental. It reflects a finding now consistent across the major studies: McKinsey's analysis of nearly 300 companies[2] found that simply giving developers AI tools does not meaningfully move the needle, and that the value accrues to organisations that rearchitect how they build software and embed AI across the full lifecycle rather than at the coding step alone. Four conditions consistently separate the organisations that compound AI value from those that lose it to friction.

1. The quality of your delivery fundamentals.

AI augmentation amplifies what is already there. Organisations with stable platforms, clear ownership, disciplined source control, and instrumented delivery extract compounding value. Organisations with ambiguous ownership, fragmented tooling, and undocumented decisions find that AI multiplies the ambiguity. Investment in delivery fundamentals, often deprioritised as not strategic, is now the entry condition for AI value.

2. The honesty of your measurement.

Most teams using AI tools believe the tools make them faster. The evidence on raw speed is mixed and context-dependent. But speed is only one axis, and measuring it alone distorts the picture in both directions. Perceived speed gains can outrun real throughput, with the difference paid for in downstream defects and rework. Equally, AI can leave raw speed roughly unchanged while materially improving quality, catching issues that would otherwise have reached production, which a speed-only measure misses entirely. Honest measurement extends past both adoption and velocity to net value: throughput, quality, and rework taken together.

3. The discipline of specification.

AI does not infer security, accessibility, performance, or compliance properties from functional requirements. It infers patterns. Properties not specified as first-class requirements do not consistently appear in the output. This is the structural insight that determines whether AI-augmented delivery scales safely. The fix is not better AI; it is better specification, with non-functional requirements treated with the same rigour as functional ones. Specification at scale also requires the organisational context that AI needs to reason about the system, not just the requirement: architecture, decisions, constraints, prior trade-offs. Without that context, even well-specified requirements produce output that is technically correct and operationally wrong.

4. The integration of governance into delivery.

Governance applied at the end of an AI-augmented pipeline becomes a chokepoint, because the pipeline produces faster than the gate can clear. Governance integrated into the pipeline becomes a property of how delivery works, with controls enforced at the moment work happens. This is the same principle *The Trust Imperative* applies to autonomous AI systems, now applied to the production of software itself.

Each of these is operational rather than technological. None of them is solved by procuring a better AI tool. All of them are addressable through deliberate organisational and methodological work, which is the work that determines whether or not the AI value lands.

The journey

The shift from current-state AI-augmented delivery to fully governed AI-augmented delivery is not a single decision. It is a maturity progression that organisations work through over time. The first three positions describe progressive levels of organisational maturity, applicable whether the work is delivered internally or by a partner. The fourth describes AND's delivery model for the agentic era, AND Flow, which operates at the highest level of that maturity.

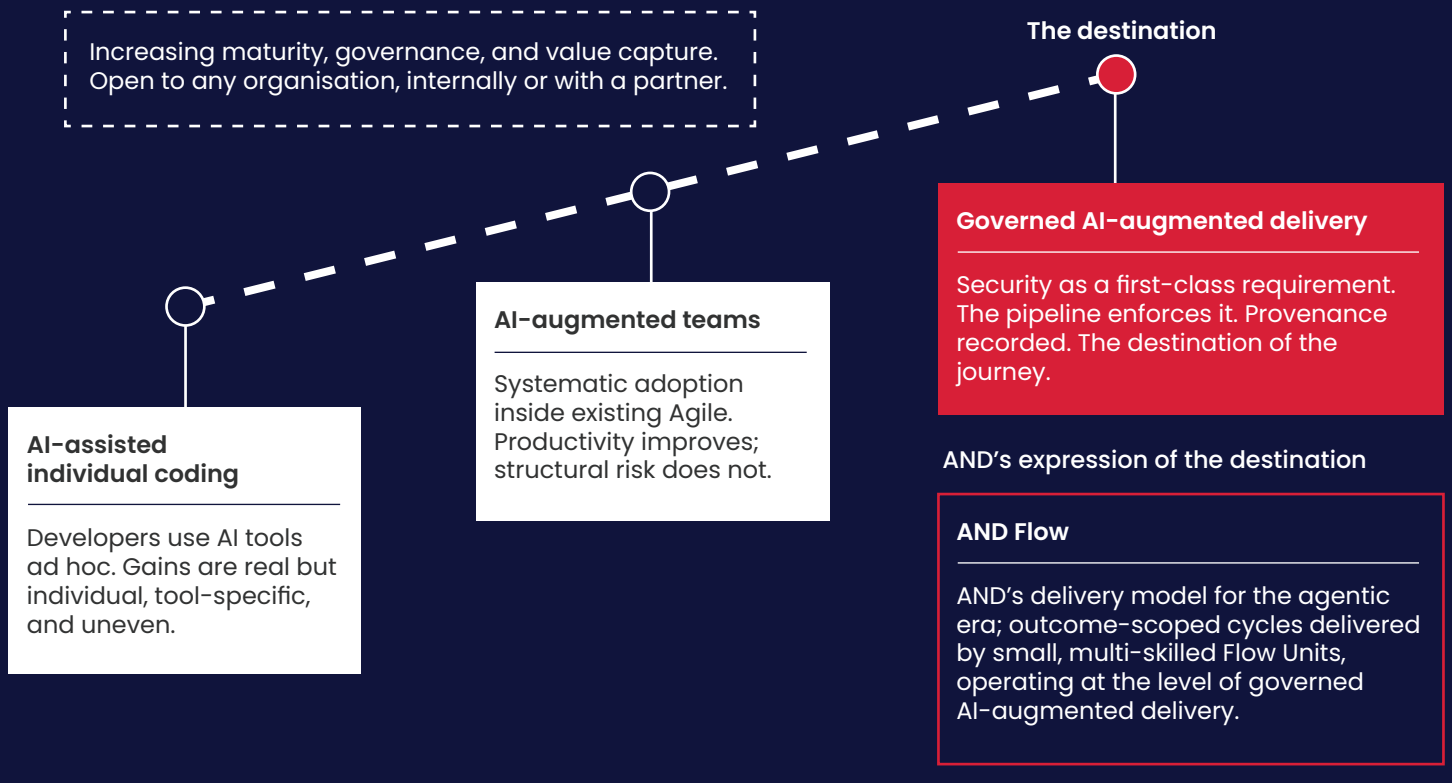
This progression aligns with how others are reading the same shift. McKinsey's April 2026 analysis[3] describes a comparable path, from developers working without AI, through tool-assisted and workflow-automated stages, to small teams supervising coordinated systems of agents. The convergence is worth noting: the destination is not a matter of one firm's model but a pattern the industry is independently arriving at.

AI-assisted individual coding.

Developers use AI coding assistants at specific touchpoints in their workflow. Tooling is selected by individual developers; adoption is uneven across teams. There is no enterprise-wide governance of prompts, outputs, or data fed into AI tools. The productivity gains are real but uneven: in controlled comparisons of squads delivering the same feature set with and without AI augmentation, we typically observe up to a 25% reduction in time to code-complete. The gains are individual and tool-specific rather than systemic, and they leave the structural governance questions of AI-augmented delivery unaddressed.

The journey to governed AI-augmented delivery

A maturity progression, not a single decision. Most organisations sit in the first two positions today.



AI-augmented teams.

Teams adopt AI tools systematically. Tooling, prompts, and patterns are shared. AI use is integrated into existing Agile or Scrum structures, with delivery still measured in story points and velocity. Security governance remains end-of-pipeline. Productivity improves; the structural risk does not change.

Governed AI-augmented delivery.

Specifications include security and quality properties as first-class requirements. The build pipeline enforces those properties automatically. AI usage is governed by a published inventory: which agents, which models, which controls. Provenance is recorded for what AI contributes. This is where the operational risk of AI-augmented production starts to be matched by the operational maturity to manage it. Once delivery is measurable on outcome rather than effort, the foundation exists for commercial relationships to evolve, but that evolution is a separate decision.

AND Flow.

AND's delivery model for the agentic era, operating at the level of governed AI-augmented delivery. Small AND Flow Units of three to four senior, multi-skilled practitioners, with composition shaped to what the Cycle requires, led by an AND Flow Lead. Governance is integrated into the four-phase cycle (Cycle Shaping, Cycle Brief, Cycle Delivery, Cycle Complete). Cycles are classified as Standard, Complex, or Strategic depending on specification depth required. Each cycle is bounded and individually scoped, with the client able to reprioritise, pause, or redirect between cycles. AND Flow operates with or without AND Harness, the platform we have built to enforce and accelerate governed AI delivery where clients adopt it.

The progression is not all-or-nothing. Most organisations sit at AI-assisted individual coding or AI-augmented teams today. Movement to Governed AI-augmented delivery is operationally significant and can be undertaken inside an existing commercial wrapper. The work is the same whether the organisation does it itself, with a partner, or through AND Flow.

A diagnostic for your own organisation

Four questions will tell you where your delivery function sits on the journey.

1. For every AI-augmented system shipping into production this quarter, can you state which security and quality properties were specified as first-class requirements and which were inferred?

2. If you measured the true net value of AI-augmented work, output and quality gained, minus rework and downstream defects, minus the compute cost of producing it, what would the number be? And is the compute cost per unit of output falling as your teams mature, or rising as agents spawn agents?

3. What proportion of code currently in production has provenance recorded: which components were AI-augmented, which models contributed, and what controls were enforced at build?

4. When was the last time your security, AI engineering, and delivery functions sat in the same room to discuss how AI-augmented work moves through the pipeline?

If the answer to any of these is "I don't know" or "we'd need to check," that is the gap. *The Build Layer* is the work of closing those gaps before they become incidents.

The AND way

At AND Digital, we are seeing the same pattern in client conversations. Leaders responsible for delivery recognise the productivity opportunity of AI-augmented delivery. They are less certain how to govern it, how to measure it honestly, and how to evolve their commercial relationships in response. The principle from *The Trust Imperative* applies: governance must be a property of how delivery actually works, not an overlay applied to it after the fact.

AND Flow is our delivery model for the agentic era. Most client relationships with AND Flow begin on the Discovery Track, the lightest-touch intake: a bounded engagement that proves the model with low commitment and low infrastructure investment. As confidence accumulates on both sides, engagements progress to the Delivery Track for full-lifecycle build work, and to the Maintenance Track for ongoing operational work on systems already governed. The track architecture lets a client enter at the lowest commitment and progress as evidence builds, rather than committing to a transformation programme before the model is proven. AND Flow operates with or without AND Harness, the platform we have built to enforce and accelerate governed AI delivery where clients adopt it.

AI augmentation does not require the abandonment of established commercial constructs. Day rates, fixed-price milestones, and capacity subscriptions remain valid procurement instruments and remain compatible with how organisations assess value for money across market. What changes is what each construct buys: at AI-augmented velocity, a unit of capacity produces more outcome per pound than at human-only velocity. The commercial relationship can evolve toward outcome-priced and value-priced models as both sides accumulate the evidence to support them. The progression is a journey both client and partner travel together as confidence builds.

Our Guide, Build, Equip approach cements success for this type of delivery transformation:

- **Guide:** Establish the maturity baseline, the governance model, and the operating choices that follow from them
- **Build:** Implement the trust architecture through methodology, governance frameworks, and AND Harness where adopted
- **Equip:** Embed the capability inside the client organisation so it persists after the engagement ends

Our first Flow-Ready engagements complete in the coming months, and published case studies will follow.

For organisations whose transformation challenge extends beyond delivery to operating-model redesign, AND Digital's *Operating Layer* paper (forthcoming) sets out the organisational architecture, the hub-and-spoke model, lifecycle governance, and change-readiness mechanisms required to cross the 2→3 maturity gap that *AI's Next Frontier* identifies. *The Build Layer* is what delivery looks like inside that architecture.

What's next

The shift this paper describes is already underway. Some organisations will respond to AI-augmented delivery by adding compliance reviews to pipelines designed for human-paced production. Others will redesign the pipeline so governance is a property of how delivery works rather than an overlay applied to it.

For organisations currently somewhere between individual experimentation and team-level adoption of AI tools, the move toward governed AI-augmented delivery begins with a single decision: that the conditions for AI value (delivery fundamentals, honest measurement, disciplined specification, integrated governance) are treated as the foundation of the work rather than as constraints upon it. The frameworks, mechanics, and platform described in this paper are what follow from that decision.

AND Digital exists to help organisations make that decision and act on it. Whether through the diagnostic above, a Discovery Track engagement, or a Guide-stage governance review, the conversation starts in the same place: a clear-eyed view of where your delivery function sits today, and an honest answer to what AI-augmented delivery would need to look like for it to scale safely tomorrow.

References

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2. Relyea, C., Harrysson, M., Bothra, N., Maniar, N., Linderman, M., & Pena, J. M., (2025, November 3). Unlocking the value of AI in software development. McKinsey & Company. https://www.mckinsey.com/industries/technology-media-and-telecommunications/our-insights/unlocking-the-value-of-ai-in-software-development

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