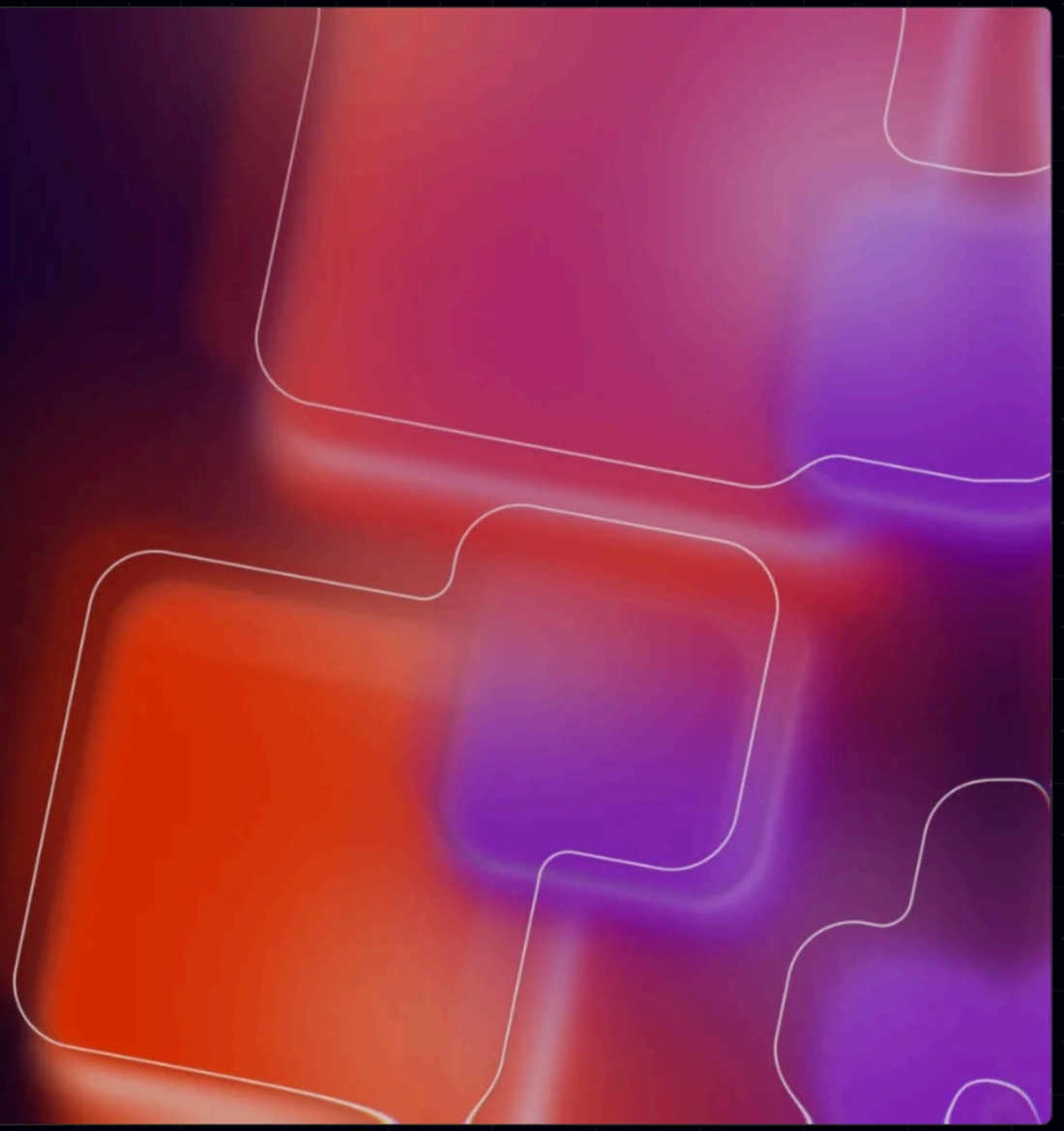
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State of AI4SDLC

Research + AI-native delivery



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Talk Route

Navigation Roadmap

Research, delivery, rollout

- Part 1: AI4SDLC Research 2025.
- Part 2: delivery loop.
- Parts 3-4: organization, task management.
- Part 5: rollout and metrics.

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Part 1

01

AI4SDLC Research 2025

How AI affects software development — meta-analysis and engineer survey

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How We Looked at AI4SDLC

Research Design

Practices, culture, trust

- Where AI is already daily.
- Where adoption remains rare.
- How speed, quality, trust connect.
- What turns personal gains into team impact.

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Research Meta-Analysis

Meta-Study: Data Sources

50+ studies, four source types

- Large-scale surveys of developers and tech leaders.
- Telemetry and product/engineering logs.
- Field experiments and controlled task studies.
- Internal corporate research and interviews.

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AI4SDLC (2025)

Research Survey

Survey of engineers and tech leads

- Self-assessed productivity, quality, trust impact.
- AI usage frequency by SDLC task type.
- Variable sample size across questions.
- Descriptive analysis without causal conclusions.

Study Limitations

How to read the results

- Sample reflects study context.
- Process changes can affect productivity.
- Industry metrics remain inconsistent.
- Novelty and adaptation skew trends.

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Meta-study patterns

Recurring 2023–2025 research patterns

Default, but uneven

80%+ growth · 10h saved

Daily tool; gains depend on task context.

Coding outpaces delivery

-1–7% stability/throughput

Bottlenecks: review, tests, integration.

ROI through process

verify-first + platform

Trust depends on SDLC maturity.

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Engineer survey signals

Results Survey

AI4SDLC Survey 2025 signals

Everyday AI tool

58% often/always

Code generation is daily practice.

Local effect dominates

64% vs 32%

Productivity outpaces quality and team throughput.

Trust and expectations diverge

49% / 60%

Low trust; business expects impact.

AI Is Daily, but Not Everywhere

High-risk tasks still need humans

Mass scenarios

- 58% often use generation.

Rare scenarios

- 24% code review; 18% legacy.

Results Productivity

Personal Speed Is Not Delivery

Coding speed ≠ value

- 64% report productivity growth.
- Team effect needs mature process.
- DORA 2024: AI adoption reduced throughput.
- DORA 2025: throughput up; instability stayed.

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Trust Requires Systemic Validation

Results Quality

Verify, don’t trust as engineering norm

Quality

- 32% quality better; 14% worse.

Trust

- 49% don’t trust AI code.
- Verification culture enables impact.

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Bottleneck Moved to Delivery

Main takeaway for team leads

- Commit → prod is still long.
- Review, tests, releases limit flow.
- Documentation becomes context quality.
- Winners rebuild the work system.

Part 2

02

Classic PDLC → AI-Native

SE 1.0 → SE 2.0: system rebuild

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SE 1.0 vs SE 2.0

Role-based vs agent-based SDLC

Two Modes SE 1.0 / SE 2.0

SE 1.0 · Role-based SDLC

- Roles pass work through SDLC.
- Brownfield keeps control and handoffs.

SE 2.0 · Agent-based SDLC

- Engineer + agents compress the loop.
- Greenfield is the experiment zone.

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The Team in SE 2.0

Team lead owns context and guardrails

Role-based team

- Streams run through role-based SDLC.
- Brownfield delivery remains core.

Agent-based team

- Team lead owns context, queue, approvals.
- Agents get bounded autonomy.

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Signals from Market Leaders

Industry 2024-2026

Google, Meta, AWS, DORA

- Google: AI inside engineering loop.
- Meta: JIT tests for diffs.
- AWS: roles compress with guardrails.
- DORA: payoff depends on platform.

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SE 2.0 Needs Discipline

Coding speedup can create rework

- Weak control → rework.
- Noisy tests → instability.
- Agents outrun review.
- Foundation: branch protection, CI, signing.

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SE 1.0 ⇔ SE 2.0

Strategy

Bidirectional practice transfer

SE 2.0 → frontier

Agentic orchestration, JIT tests, auto-docs. Greenfield and R&D.

SE 1.0 → foundation

Checkpoints, developer platform, safe delivery.

Practice transfer

1.0 gives guardrails; 2.0 returns automation.

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Part 3

03

AI-Native Organization

SDLC and company model both change

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Why the Next Step Is AI-Native Organization

Shift Org Design

Faster code; slower decisions and handoffs

Layers compress

After SDLC roles, organizational layers shrink too.

Decision latency

Approvals and handoffs become bottlenecks.

Leverage over headcount

Focus shifts to output per employee and platform.

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Signals Big Tech

Org Signals at Market Leaders

Wider span, fewer levels, stronger platform

+ Wider span

- Meta: AI org ratio reaches 1:50.
- Nvidia: ~50 CEO reports.

+ Fewer levels

- Amazon: +15% IC/manager ratio.
- Microsoft, Google: AI-first tooling.

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Flattening Needs Platform Support

Without platform, chaos follows

- Need golden paths, feedback, policy-as-code.
- Otherwise managers absorb bottlenecks.
- Ratios 1:50 are not templates.
- Managers design human-agent loops.

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Part 4

04

AI-native task management

Atlassian and Linear show: not just coding changes, but the work unit itself

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Task management: the next bottleneck

Shift Task Management

Tickets are no longer manual forms

Before the ticket

Incidents, chats, and docs become task sources.

Triage doesn't scale

Fast flow turns backlog into queue.

Status is computed

Task stores links, history, next steps.

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Ticket tracker to contextual work graph

Model Classic vs AI-native

The work unit itself changes

C Classic task management

- A person creates the task manually.
- Context moves from chats and docs.

AI AI-native task management

- System creates work item from signal.
- AI suggests team, assignee, labels.

Signals from Atlassian and Linear

Market Signals | Atlassian × Linear

Intake → enrichment → delegation

A Atlassian

- Jira: AI-assisted work items and summaries.
- Rovo/agents add context and handoffs.

L Linear

- Triage Intelligence suggests owner and labels.
- AI agents work; human owns outcome.

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DevOps/platform: What to Do

Practice DevOps / Platform

Task management as delivery platform

- Connect incident, support, docs.
- Automate intake; human-owned approval.
- Trace intent → PR → deploy.
- Measure signal-to-action lead time.

Part 5

05

AI-Native Rollout in 2026

New operating model, not IDE pilots

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AI as Operating Model Layer

Inside the standard delivery loop

AI enters the workflow

PR, review, tests, CI/CD = AI surfaces.

Agents get bounded tasks

Bounded tasks under human control.

Management language changes

Throughput, risk, economics.

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Signals Big Tech

Big Tech Moves AI-Native to System

Workflow embedding + measurement platform

W Workflow embedding

- Microsoft: AI reviewer inside PR flow.
- GitHub: coding agent opens draft PR.

P Platform, evals, economics

- AWS/Amazon: AI linked to e2e delivery.
- Stripe: maturity measured through evals.

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How Big Tech Measures the Shift

Metrics | Management Model

Adoption → throughput → quality/risk → economics

Adoption + workflow

usage, IDE, CLI, agents

Who entered engineering.

Quality / Risk

bugs, tests, incidents

Defects, tests, incidents.

Throughput + economics

cycle time, CTS-SW, ROI

Did flow improve? Did AI pay?

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Takeaways for Teams

Managed AI-native delivery system

- Embed AI into regular workflows.
- Give agents bounded autonomy.
- Keep approvals and accountability human-owned.
- Measure delivery: throughput, risk, economics.

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Key Theses

What to take with you

- AI accelerates artifacts; impact needs mature verification.
- Bottlenecks shift to task management and handoffs.
- Manage AI-native via delivery outcomes.

- ↗ai4sdlc-research.space · ↗tellmeabout.tech

Materials

Sources References

Methodology and sources

- AI4SDLC Research 2025
- DORA AI / State of DevOps
- GitHub, Microsoft, Google, AWS
- Stack Overflow, JetBrains, Atlassian

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Thank You!

If you want to explore the materials mentioned in the talk, head to the ”Book Cube” channel — all links and resources are collected there

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