



SPS COMMERCE



## AI ENABLEMENT IN THE SDLC: A STRATEGY SAMPLER



WRITING CODE WAS NEVER THE BOTTLENECK!

Since engineers have consistently said they wish they had more time to write code, AI adoption should focus on where frustration and bottlenecks are prevalent.

Jennifer Riggins



online  
business systems

CONQUEST

IcePanel

POLLARD  
banknote limited

RICHARDSON

PRAIRIE  
DEV con  
WEB | DEV | CLOUD | AI





# TRAVIS GOSELIN

DISTINGUISHED SOFTWARE ENGINEER

DEVELOPER EXPERIENCE

[travisgosselin.com](http://travisgosselin.com)

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@travisjgosselin



## SPS COMMERCE

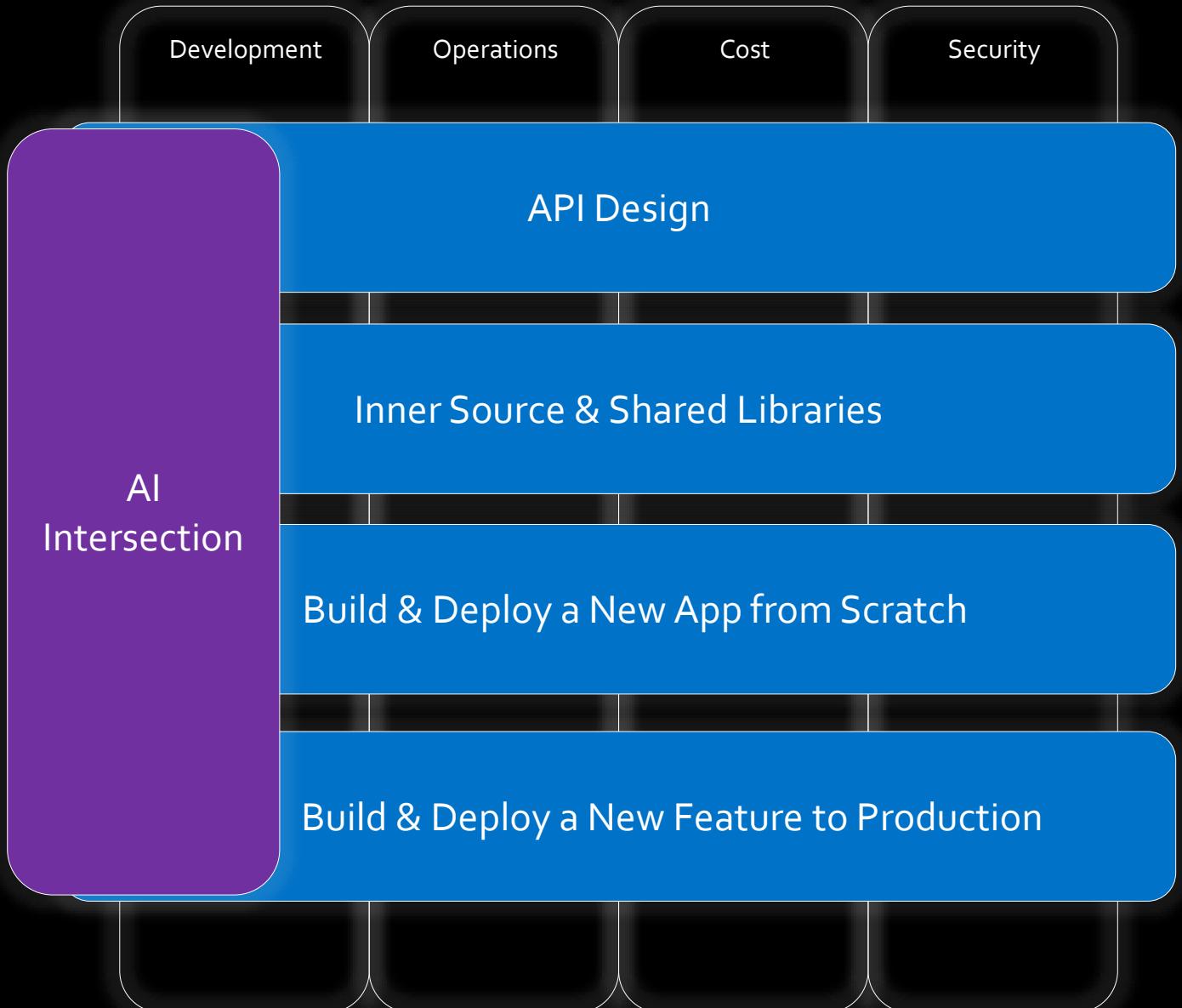
INFINITE RETAIL POWER™

The screenshot displays the SPS Commerce platform's dashboard. At the top, there are four summary cards: 'Pending Partner Acknowledgment' (13), 'New Orders' (218), 'Errors' (21), and 'Ready for Change Acknowledgment' (59). Below these are two main sections: 'Open Orders' and 'Orders Missing a Shipment'. The 'Open Orders' section lists 13 orders from various trading partners, including Dick's Sporting Goods, Apex Sports, Walmart, Cabela's, Champ's Sports, Finish Line, Foot Locker, Gander Mountain, Bass Pro Shops, and Mills Fleet Farm. The 'Orders Missing a Shipment' section lists 218 orders. On the right side, a 'RECENT ACTIVITY' sidebar shows a log of events such as order acknowledgments and vendor compliance updates.

# DEVELOPER EXPERIENCE: CAPABILITIES

IDENTIFIED HORIZONTAL FAST TRACKS TO BE CURATED FOR MAXIMUM PRODUCTIVITY.

- Reduce toil
- Keep developers in “creative flow”
- Reduce feedback loop duration
- Reduce duplication
- Simplify
- Codify best practices



"

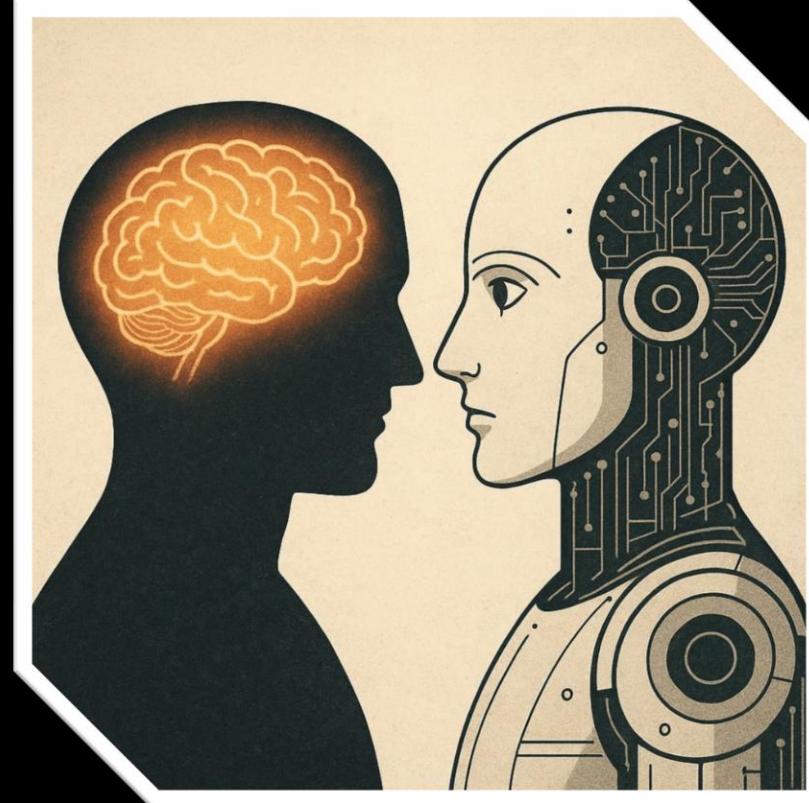
Developer Experience is the activity of studying, improving and optimizing how developers get their work done.

"

[theappslab.com](http://theappslab.com) (2017)

# DEVELOPER EXPERIENCE

DOES IT MATTER ANYMORE?



"

Developers work in rainforests, not planned gardens.

"

[a16z.com](http://a16z.com)

# DEVELOPER EXPERIENCE

AI Will Save Our Productivity!...?

68% of developers spend more time  
**2025** resolving security vulnerabilities.

Harness 2025

67% of developers spend more time  
**2025** debugging AI Generated code.

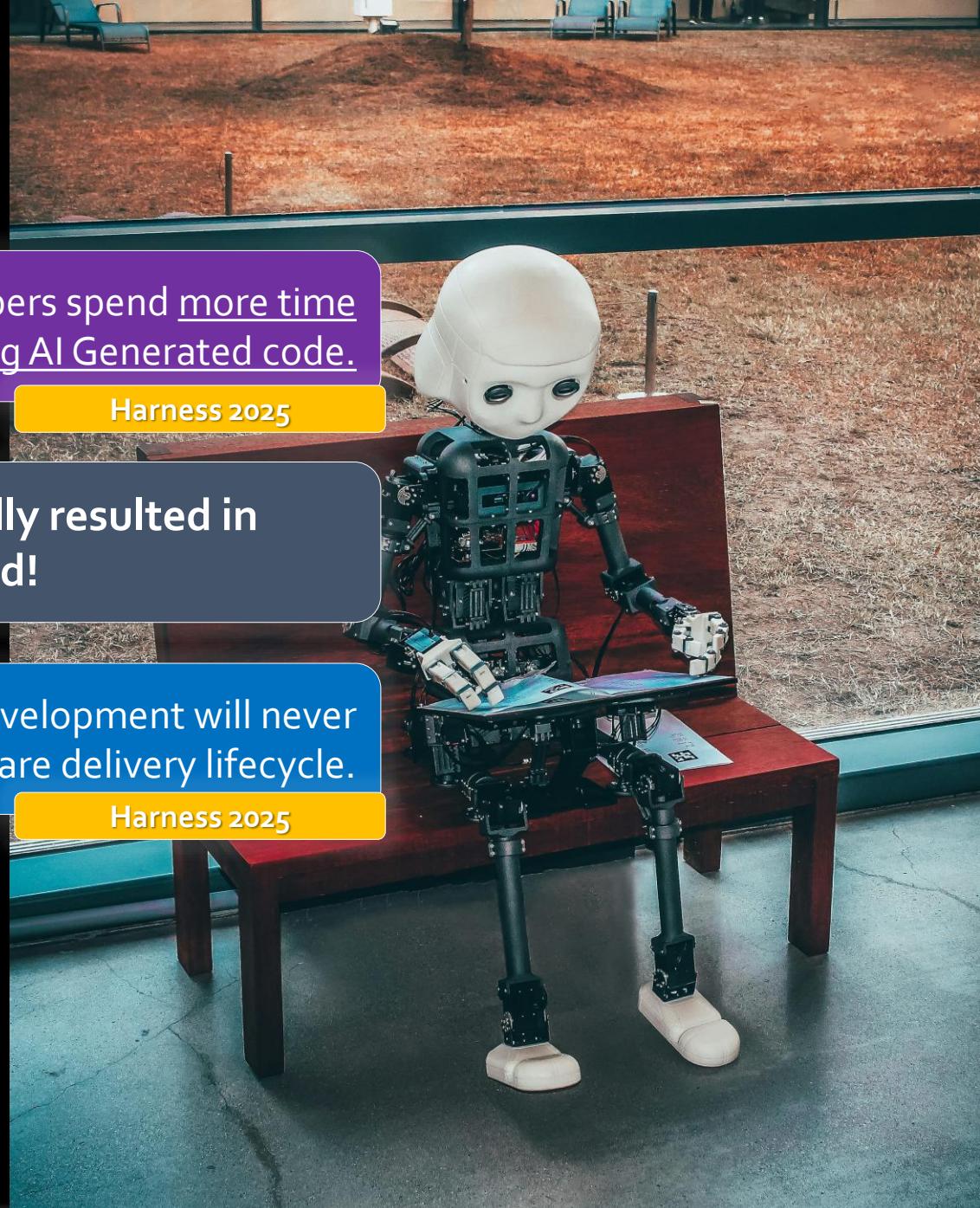
Harness 2025

The adoption of AI codegen tools thus far has actually resulted in significant increase in developer workload!

96% of developers say the full benefits of AI assisted software development will never  
**2025** be realized until their use extends to the entire software delivery lifecycle.

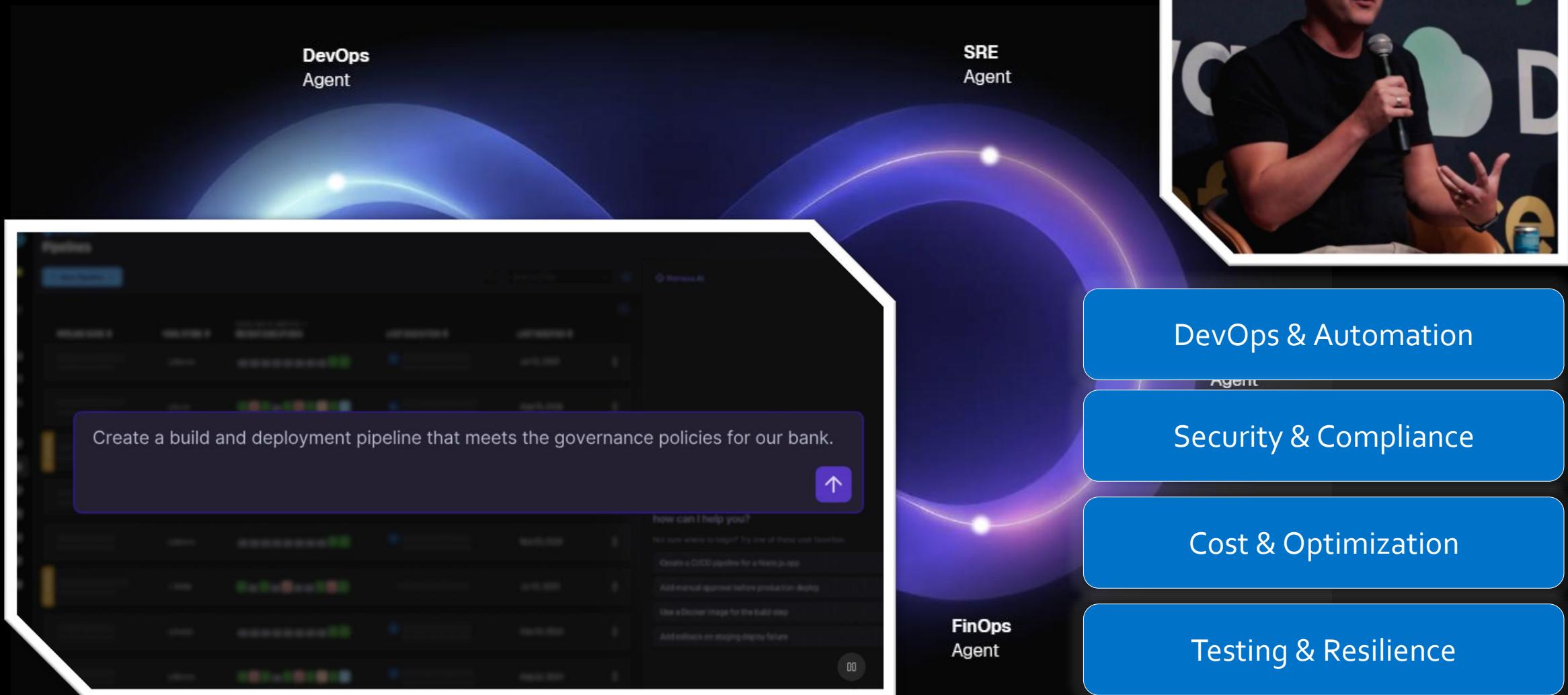
Harness 2025

*AI won't save productivity alone.  
If humans struggle to make key contextual connections, how can AI?*



# AI ENABLEMENT IN THE SDLC

Example: Harness AI



# AI ENABLEMENT IN THE SDLC

A Strategy Sampler

Deliberately embedding AI capabilities, tooling, and practices into every phase of the software development lifecycle (SDLC) so teams deliver higher-quality software faster, safely, and repeatedly.

Experimental  
Pre - 2020

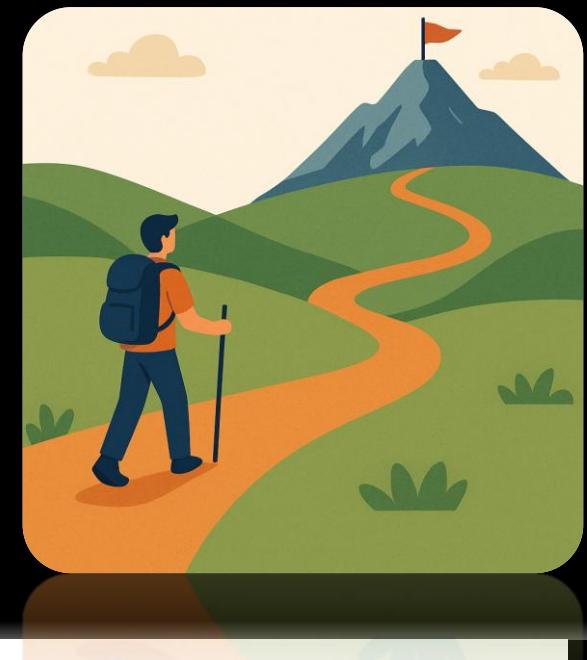
Awakening  
2020-2021

Commoditization  
(Code Generation)  
2022-2024

Autonomy  
(Agentic)  
2025 & Beyond

What feels like the "last mile" may in fact be most of the journey in the years to come!

Sylvain Kalache (Head of AI Labs at Rootly)



# AI ENABLEMENT

Awareness & Evaluation

Global AI is growing at a CAGR of almost 35% (Compound Annual Growth Rate)

\$126 Billion Rev.

2025

\$1.8 Trillion Rev.

2030

Tools

Speed Matters

Explosion of  
Tooling

Short Half-Life

FOMO

AI won't wait for your governance board—tooling lifecycles now run in weeks, not years.

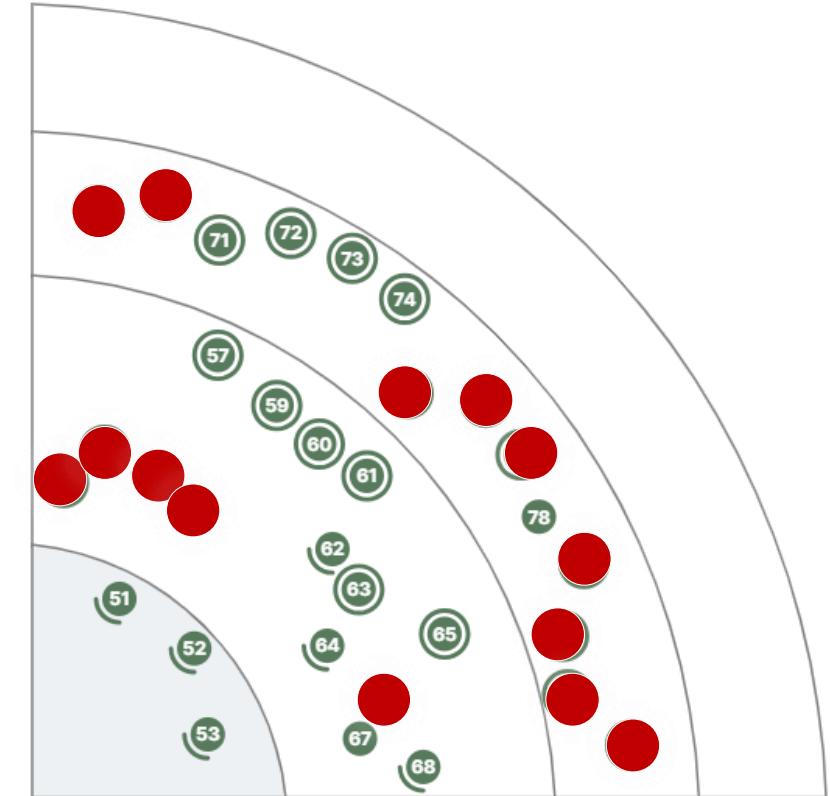
Evaluation Must!

Continuous  
Scanning

Fast

Feedback

Lightweight



# AI ENABLEMENT

Problem First

Vendor-Driven Choices



Developer-Led Discovery



“ Comparing the tools by features or technology is less important every day. You’ll waste a lot of energy debating minor differences that won’t matter next year. Instead, focus on what problem you want to solve. Are you trying to improve testing? Code review? Documentation? Incident response? Figure out the goal first. Then see if an AI tool (or any tool) actually helps. ”

Ankit Jain – CEO Aviator

# AI ENABLEMENT

## Systems Thinking

Everything Connects

Hidden Dependencies

Whole Lifecycle Impact

Optimize for the Flow, Not the Step

Risk & Resilience

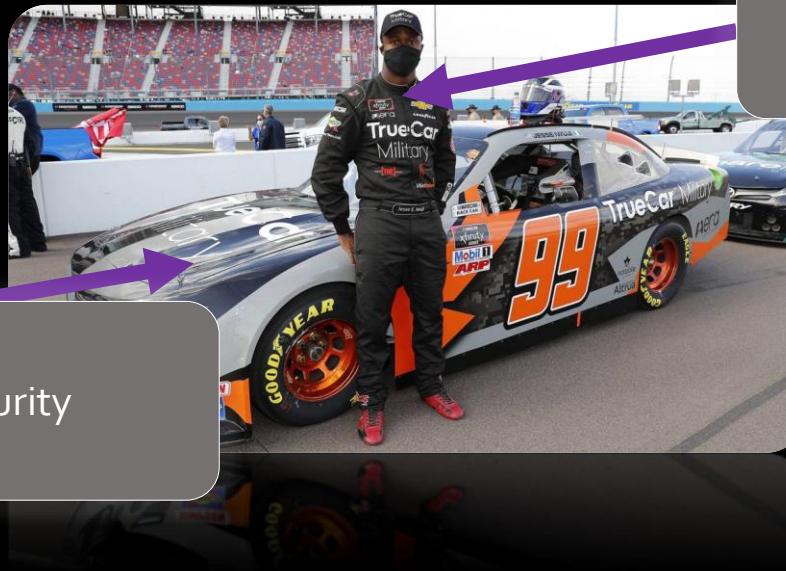
Focus on Systems & Integration Rather than Flavor of the Month

“

Systems thinking is a way to approach issues by looking at them as systems. Rather than considering only how to solve an immediate problem, you consider how all of the pieces connect to make the whole.

University of Phenix

AI tooling is NOT plug and play. There is a learning curve!



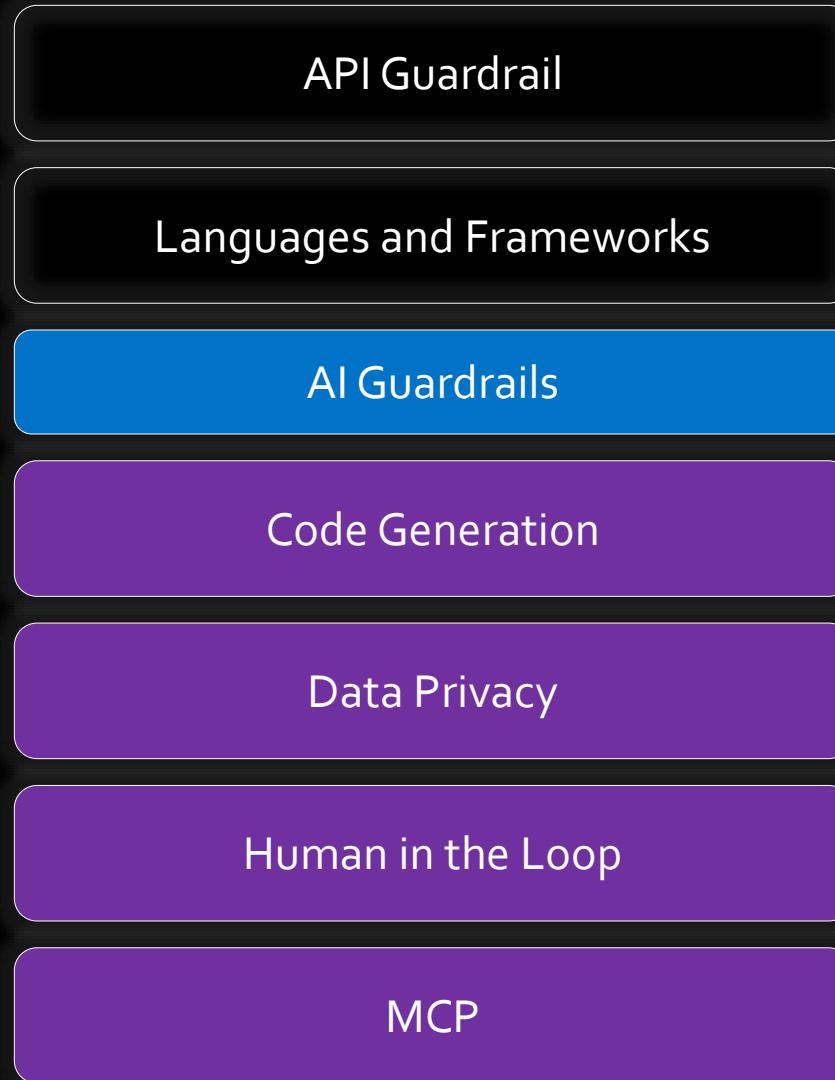
AI Maturity

Tool Proficiency

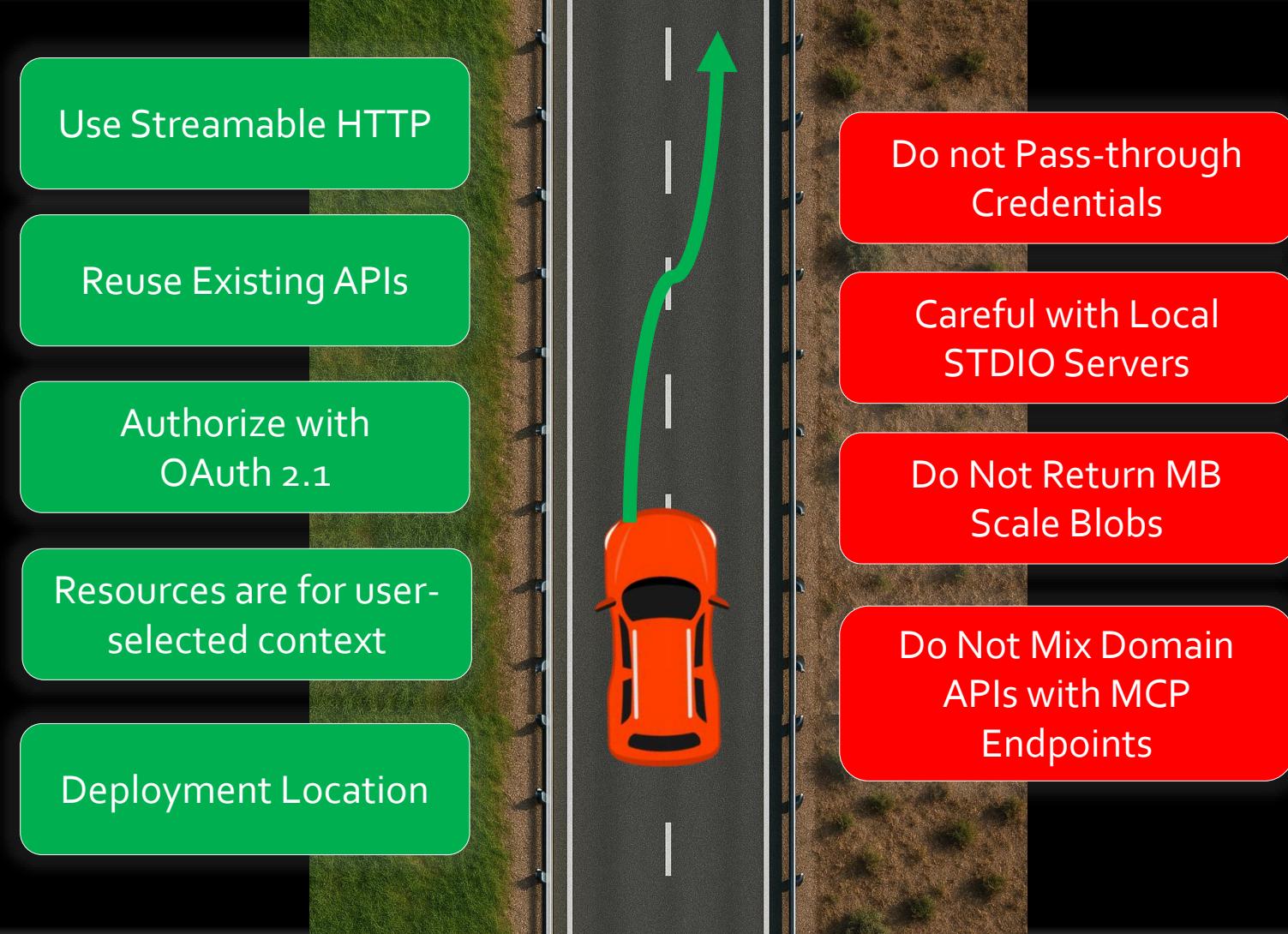
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# AI ENABLEMENT

## Guardrails & Innovation Direction



“ A **guardrail** is a **predefined constraint, standard, or practice** designed to keep teams moving fast **while staying safe and aligned**. ”



Use Streamable HTTP

Reuse Existing APIs

Authorize with OAuth 2.1

Resources are for user-selected context

Deployment Location

Do not Pass-through Credentials

Careful with Local STUDIO Servers

Do Not Return MB Scale Blobs

Do Not Mix Domain APIs with MCP Endpoints

# AI ENABLEMENT

Human-in-the-Loop Focus

SUCCESS · EDUCATION

**This Stanford computer science professor went to written exams 2 years ago because of AI. He says his students insisted on it**



BY NICK LICHTENBERG

FORTUNE INTELLIGENCE EDITOR

September 7, 2025 at 5:35 AM EDT



W

Leskovec is wrestling with a question that touches everyone in the workforce: What is a human skill, what is an AI skill, and where do they merge?



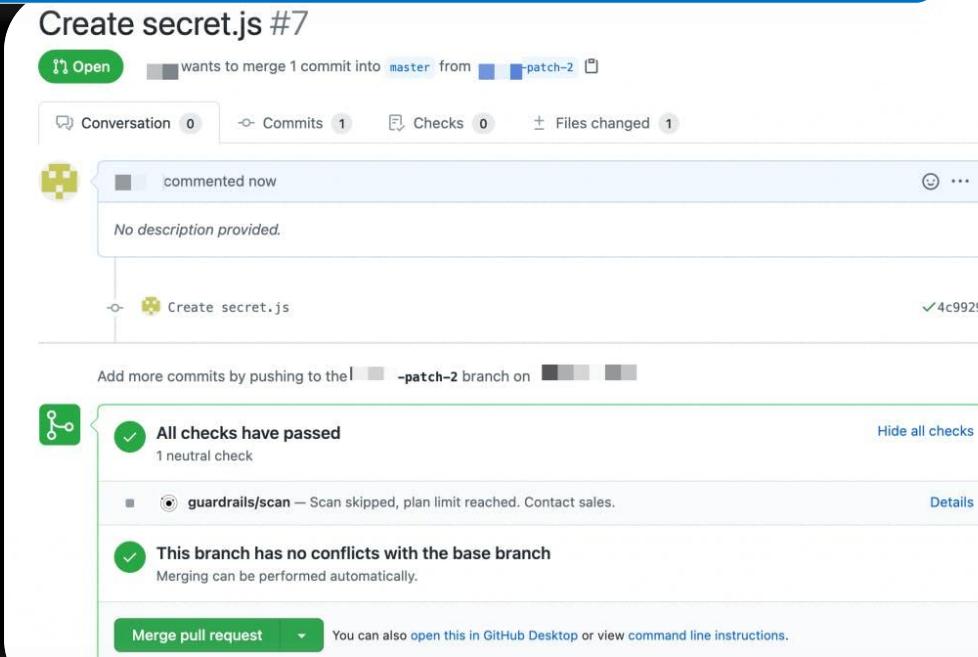
Jure Leskovec.  
JURE LESKOVEC

<https://fortune.com/2025/09/07/stanford-professor-jure-leskovec-hand-written-graded-tests-ai/>

# AI ENABLEMENT

## Human-in-the-Loop Focus

### GitHub Popularized “Pull Requests” in 2008



Despite model makers pushing the narrative that fully autonomous AI development agents are coming very soon, the consensus remains that having a human in the loop is here to stay, at least for some time.

AI Doesn't Replace Your Need for CI or Automated Checks – it increases them!

Best Practices You Had Before Are Even More Relevant now!

Rally More Help into Pull Request Automation

steps:

- name: identify testing gaps
- id: inference
- uses: actions/ai-inference@v1
- with:
  - prompt: Identify testing gaps based on changes in code.



AI was no replacement for human judgement: Programming often involves trade-offs. LLMs can inform you about those trade-offs, but someone has to make the call about what path to take based on your organization's goals and standards.

GitHub

# AI ENABLEMENT

## Golden Repositories

A single, authoritative source of truth that teams use to anchor consistency, governance, and automation. It's "golden" because it's not just another repo in the ecosystem—it's the canonical reference point that AI agents, developers, and pipelines can rely on without ambiguity.

### Why Now?

AI Propagation is Fast

AI Needs High-Signal Inputs

Discoverability for Agents

Trust and Governance

Assets

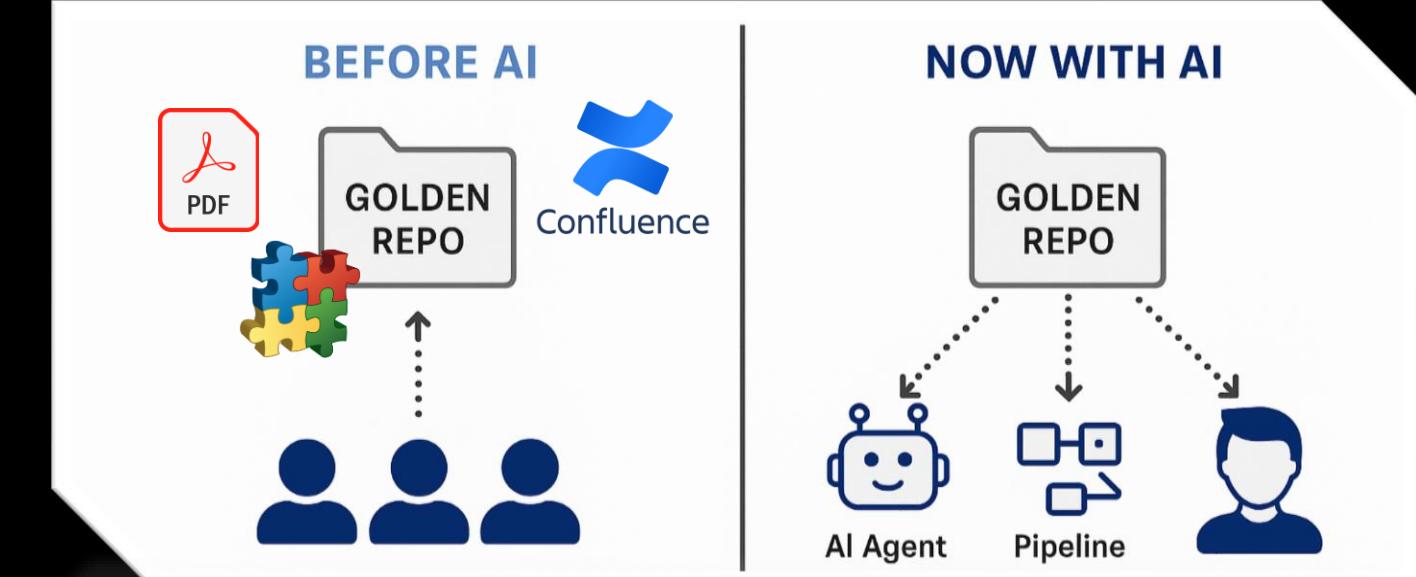
Platform Configuration

Framework Bootstrapping

Standard Automation

Agent Instructions

Plans & Prompts



# AI ENABLEMENT

Unified Knowledge is Context

Unified Knowledgebases a  
REQUIREMENT!



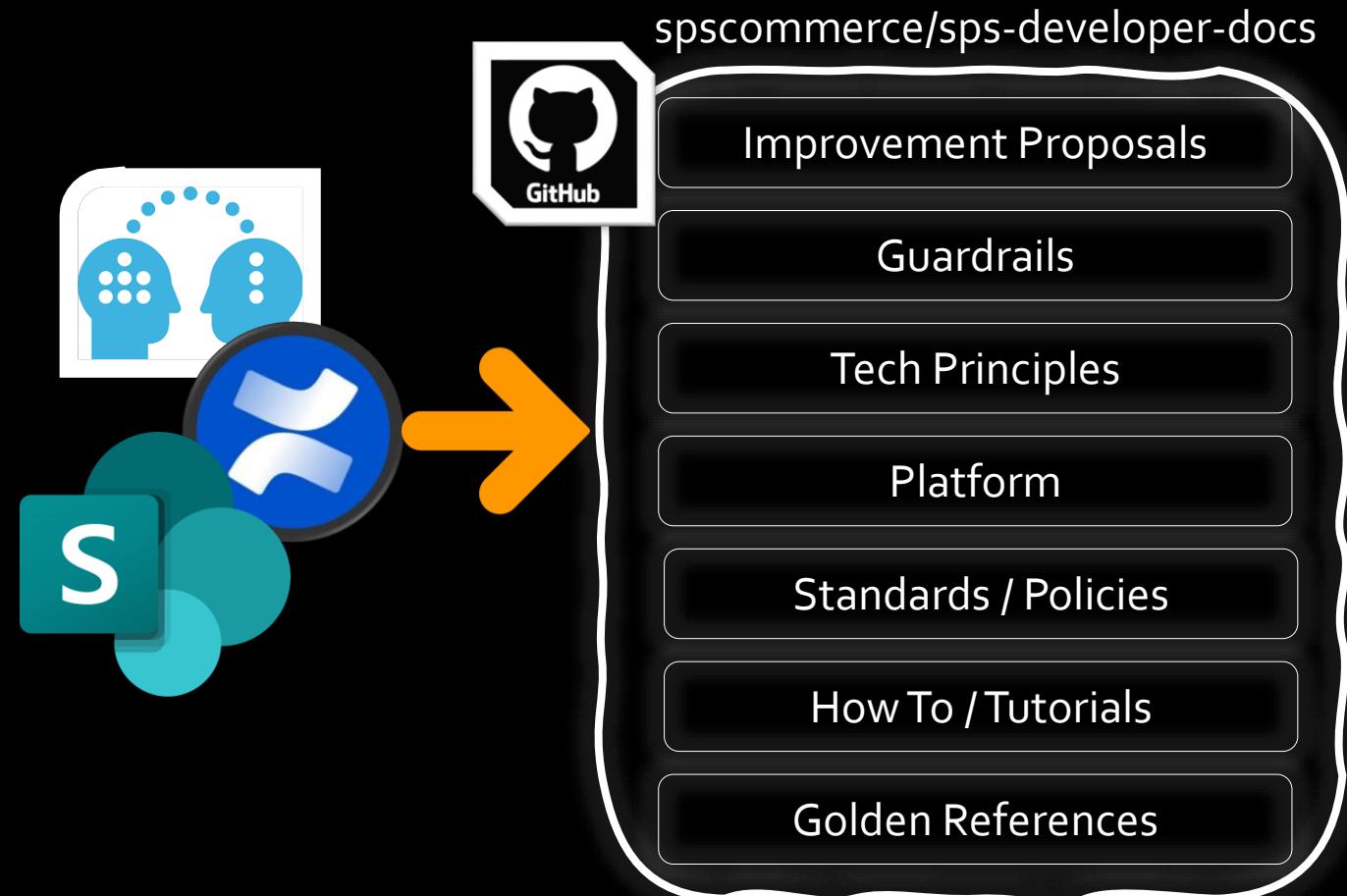
Docs as Code?

“

Most organizations struggle with fragmented knowledge, outdated documentation, and inaccessible tribal wisdom. Unified knowledge is the new productivity fuel. Without curated, high-quality data, even the best AI models falter.

”

Linear B



# AI ENABLEMENT

Unified Knowledge is Context

Intersection of Your  
Technology Decisions &  
Opinions with the Industry

Unified knowledge is the new  
productivity fuel (Linear B).



SPS COMMERCE DEVELOPER DOCS

Home Platform AI Best Practices

Overview

Get Started

Before You Start

Quickstart Guide

EKS Cluster Access >

Authentication Tokens

Egress

Troubleshooting >

How-to Guides

Deploying a "Hello World" API >

Multi-Architecture Build Support >

Tracing with OpenTelemetry and Honeycomb >

Migrating from ECS >

Mounting EFS Volumes

Autoscaling with CloudWatch Metrics

Integrating With Authzed

Enabling Multi-Region

Migrating to "V2" Azure Pipelines Agents

Building & Deploying

Azure Pipelines >

BDP Core >

SPS

Deco

Runtime

Search

Ask AI

Copy page

## Overview

### What is Atlas?

Atlas provides tooling, patterns, and infrastructure for SPS Engineers for every stage of a containerized application's SDLC (Software Development Lifecycle). SPS engineers grapple with some of the most complex technology challenges in our industry. The Atlas Team enables SPS Engineers to focus on solving those challenges by delivering out-of-the-box tooling to develop, launch, deploy, test, maintain, monitor, alert, secure, authenticate, and authorize any containerized application.

Atlas is SPS Commerce's [internal developer platform](#).

Atlas' curation of technologies, integrations, opinions, and guardrails collectively enable secure, scalable, and efficient software delivery so our engineers can focus on being Obsessed with Customers.

### Get Started

1 Prerequisites  
Before you get started you will need a Kubernetes Namespace, Azure DevOps Project and an AWS Product Account.

2 Tutorials  
Tutorials will walk you through creating your first Atlas application as a hello-world API.

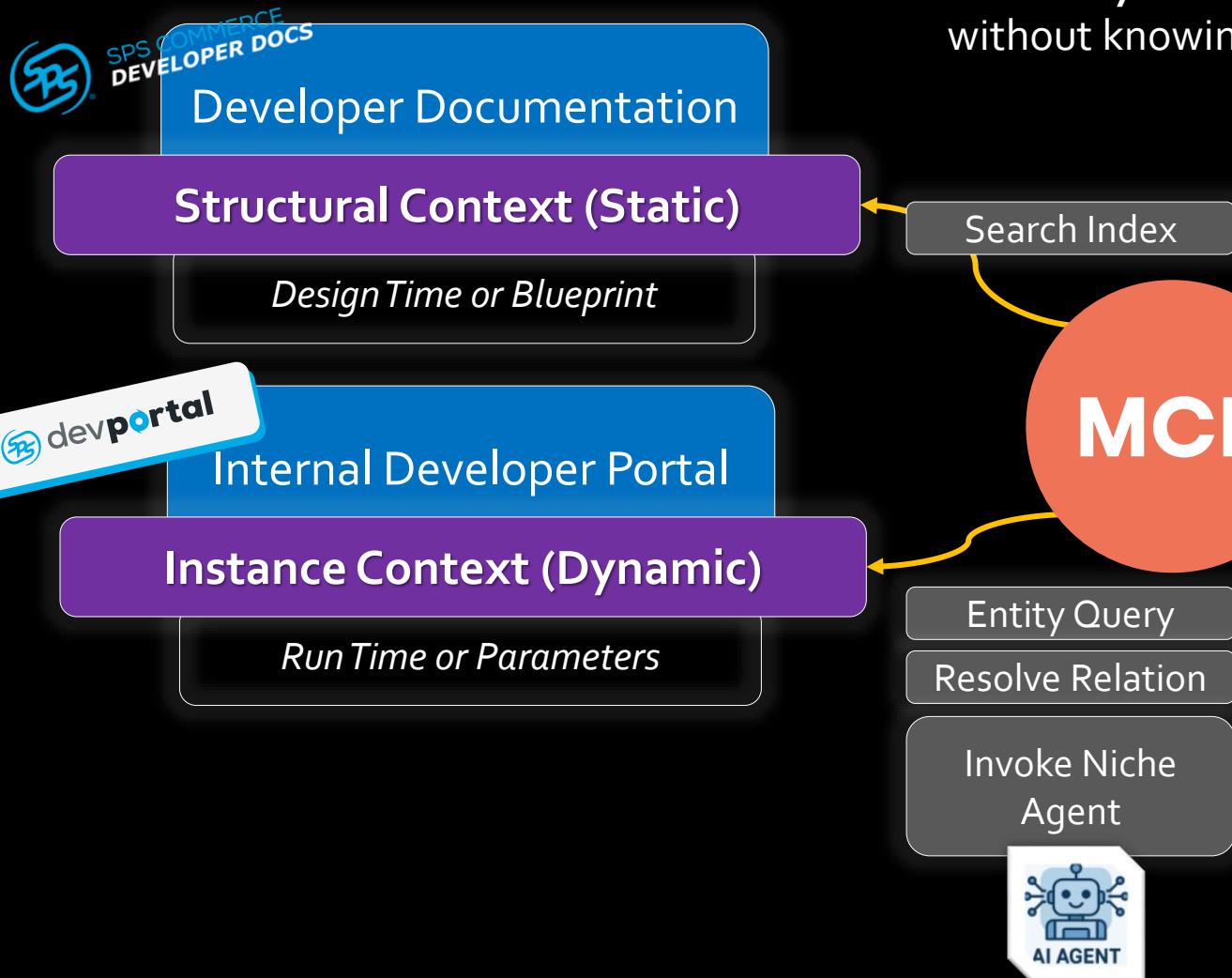
3 Reference Application

fern × SPS COMMERCE

buildwithfern.com/post/spc-commerce-internal-documentation

# AI ENABLEMENT

Driving AI Context



With only **structural context** → AI is like an architect sketching floor plans.

With only **instance context** → AI is like a clerk filling forms without knowing if they're right.

**Golden Path Templates at Runtime**

**Smart Validation with Guardrails**

**Environment Aware Suggestions**

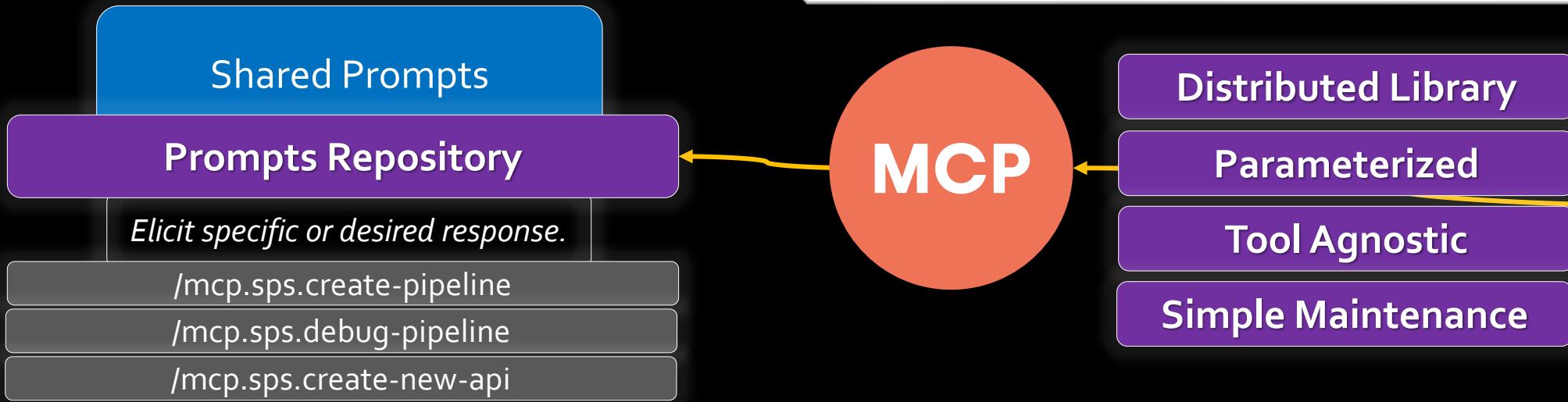
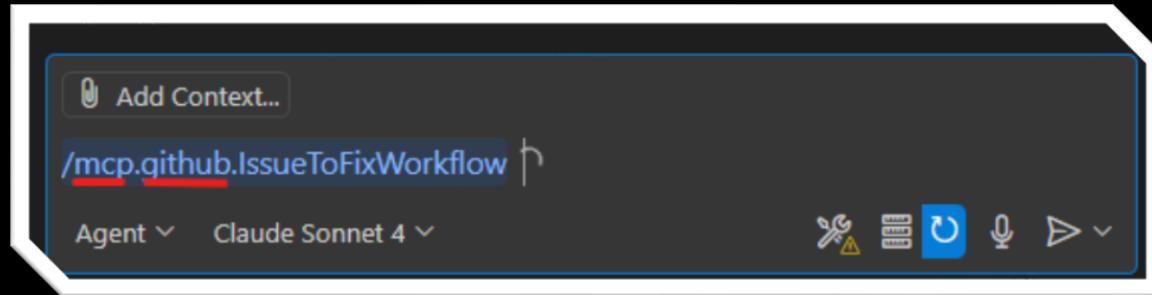


The mobile application interface includes the following text and logos:

- Context for your agent.**
- Subtext: Stop hallucinations by searching public and private docs. No context bloat.
- Logos for various AI and developer tools: OpenAI, ANTHROPIC, clerk, supabase, Firebase, LangChain, perplexity, docker, braintrust, Fireworks AI, Hypermode, NEXT.js, Semgrep, Vercel, GitHub, Browserbase, Redis, stripe.
- A yellow button at the bottom with the URL: <https://github.com/ref-tools/ref-tools-mcp>

# AI ENABLEMENT

## Shared Prompts



```
1 + # Bootstrapping a New App from the SPS FastAPI Template
2 +
3 + This guide walks you through creating a new API from the template, applying automated replacements with
4 +
5 + ## 1) Prerequisites
6 + - Python 3.10+
7 + - Node.js (for Spectral CLI)
8 + - Docker (optional for local parity with CI)
9 + - Access to JFrog Artifactory via `pip.conf` in CI (see pipeline)
10 + - Azure Pipelines service connection configured and authorized (see Quickstart): https://docs.platform.
11 +
12 + ## 2) Copy the template into a new directory/repository
13 + From the monorepo root, copy the template to a clean directory:
14 + ````
15 + rsync -avh sps_fastapi_template/ NEW_REPO_DIR/ --exclude 'docs/doctrees'
16 + ````
17 + - Initialize git and set the remote:
18 + ````
19 + cd NEW_REPO_DIR
20 + git init
21 + git add .
22 + git commit -m "chore: scaffold from sps_fastapi_template"
23 + git remote add origin <remote-url>
24 + ````
```

```
1 + # Cursor Bootstrap Checklist for New App
2 +
3 + Fill this out to let the Cursor agent fully customize the template and CI/CD. Check off each item as you answer it.
4 +
5 + How to use this file
6 + - Use it as the single source of truth for answers during setup.
7 + - Option A (interactive): Ask the Cursor agent to "walk me through `docs/CURSOR_BOOTSTRAP_QUESTIONS.md` one question at a time; wait for my answer between each question; update the checklist with my responses."
8 + - The agent must, after each answer: change the checkbox from `-[ ]` to `-[x]` for that item. Do not write the answer text into this file.
9 + - Option B (batch): Fill this file manually by checking items you've completed, then ask the agent to "apply all answers from `docs/CURSOR_BOOTSTRAP_QUESTIONS.md` across the repo per `cursor/rules/bootstrap_rules.mdc`", then run tests and OpenAPI lint.
10 + - The agent should keep answers in memory for the current session (or a separate config), use them to drive replacements (see `cursor/rules/bootstrap_rules.mdc`), and avoid storing sensitive values in this file.
11 +
12 + ## Core identity
13 + - [ ] app_name (lowercase-hyphenated, e.g., `orders-api`):
14 + - [ ] project_name (human-friendly title):
15 + - [ ] project_description:
16 + - [ ] tech_registry_id:
17 +
18 + ## Ingress and domains
19 + - [ ] atlas_path (e.g., `/orders`):
20 + - [ ] Additional public paths beyond health endpoints:
21 + - [ ] Documentation base URL overrides (if any):
22 +
23 + - [ ] DOCKER_REGISTRY_URL (if any):
24 + - [ ] VIRTUALHOSTS (if any):
25 + - [ ] VIRTUALHOSTS (if any):
```

# AI ENABLEMENT

API Agent Experience Matters (AX)



Make spec updates part of your dev workflow and use tools to catch drift. Consider adopting a design-first approach for new APIs so that you think through the contract fully (which helps catch ambiguities that an AI might misinterpret) before coding. If you're code-first, use automation to generate the spec and verify it. An accurate spec will likely be the primary way AI agents learn to use your API.

APIContext 2025

Accurate OpenAPI

Document Changes

Constraints

Generate Tests / Prompts

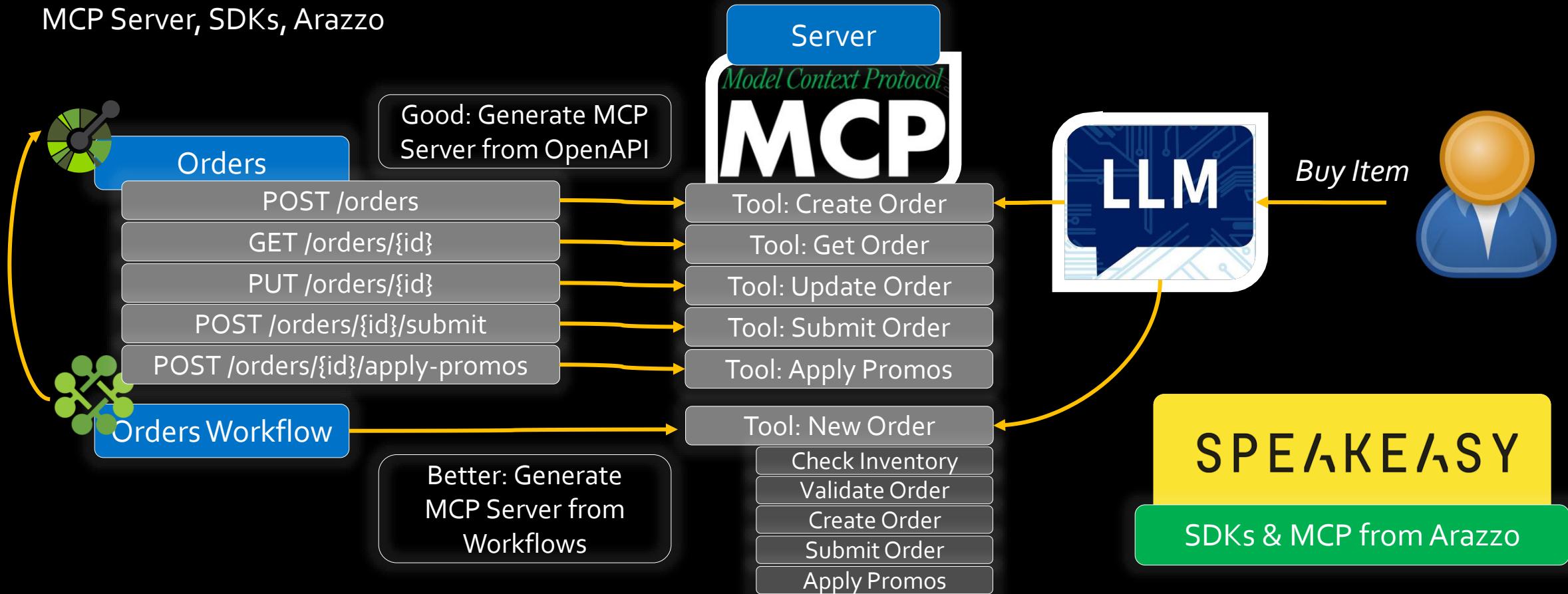
Machine Hints



# AI ENABLEMENT

MCP Server, SDKs, Arazzo

<https://github.com/harsha-iiiv/openapi-mcp-generator>  
<https://www.speakeasy.com/blog/release-model-context-protocol>



Understand Sequencing

Understanding Branching Logic

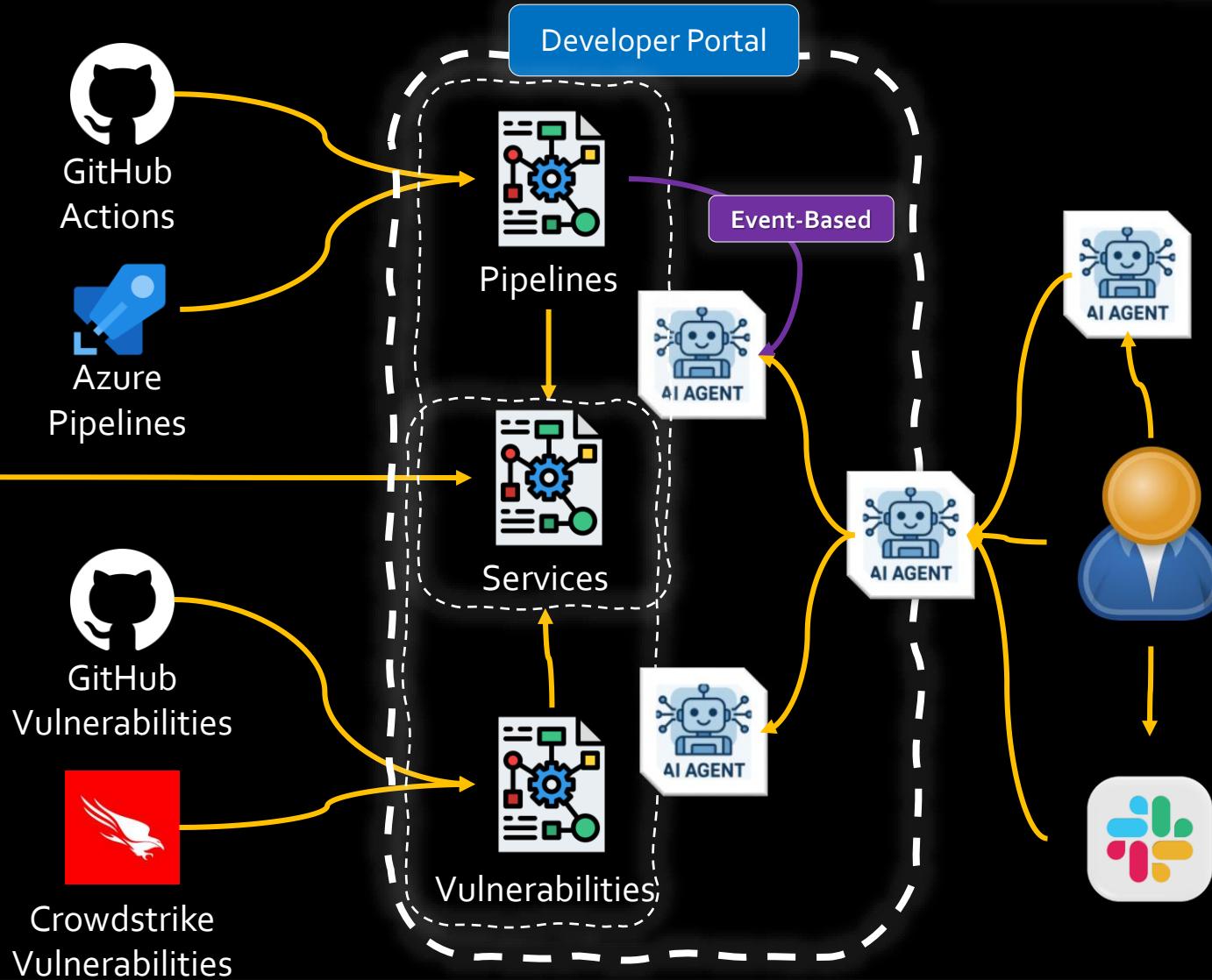
Manage Retries and Error-Handling

Stitch Together Calls

Deterministic & Model Agnostic

# AI ENABLEMENT

Structured SDLC Data



## GOAL

Make SDLC Context Accessible through Natural Language

Accessible

Incidents

Augmenting  
other AI Context

Automation and  
Workflows

*What were the last 5 changes to production for service zone "fulfillment"?*

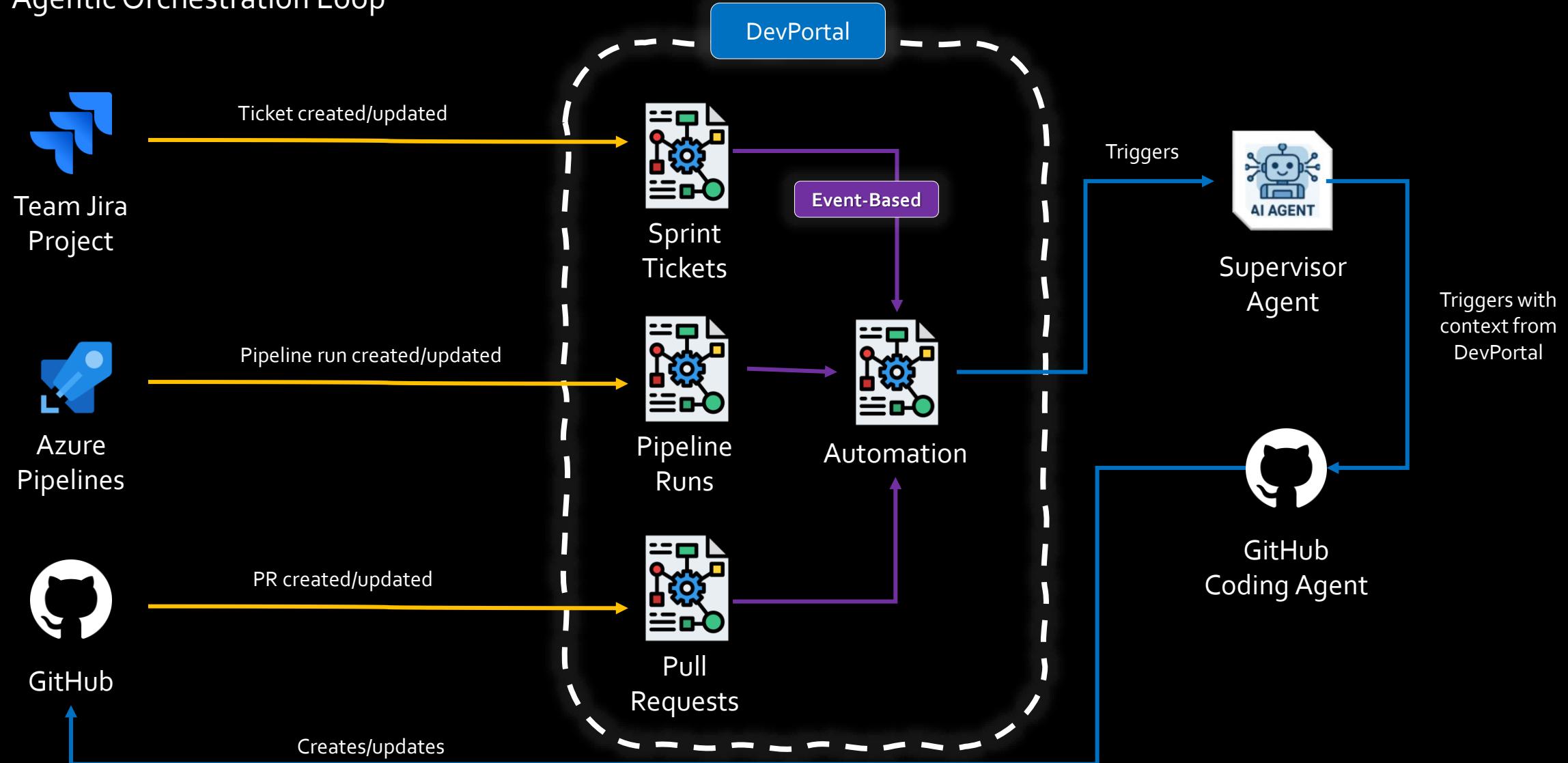
Large Advantage to Structured Data

Small Discrete Agents & Prompts Are Better

Investing in Prompts is Valuable

# AI ENABLEMENT

## Agentic Orchestration Loop



# AI ENABLEMENT

Fostering Team Skills



Some people keep saying not to learn to code on the grounds that AI would automate it. We will look back on that as some of the worst career advice ever given. AI will make software development easier, just like the compiler did. Or open source. Or the cloud. More people should learn coding, not less.

Thomas Dohmke

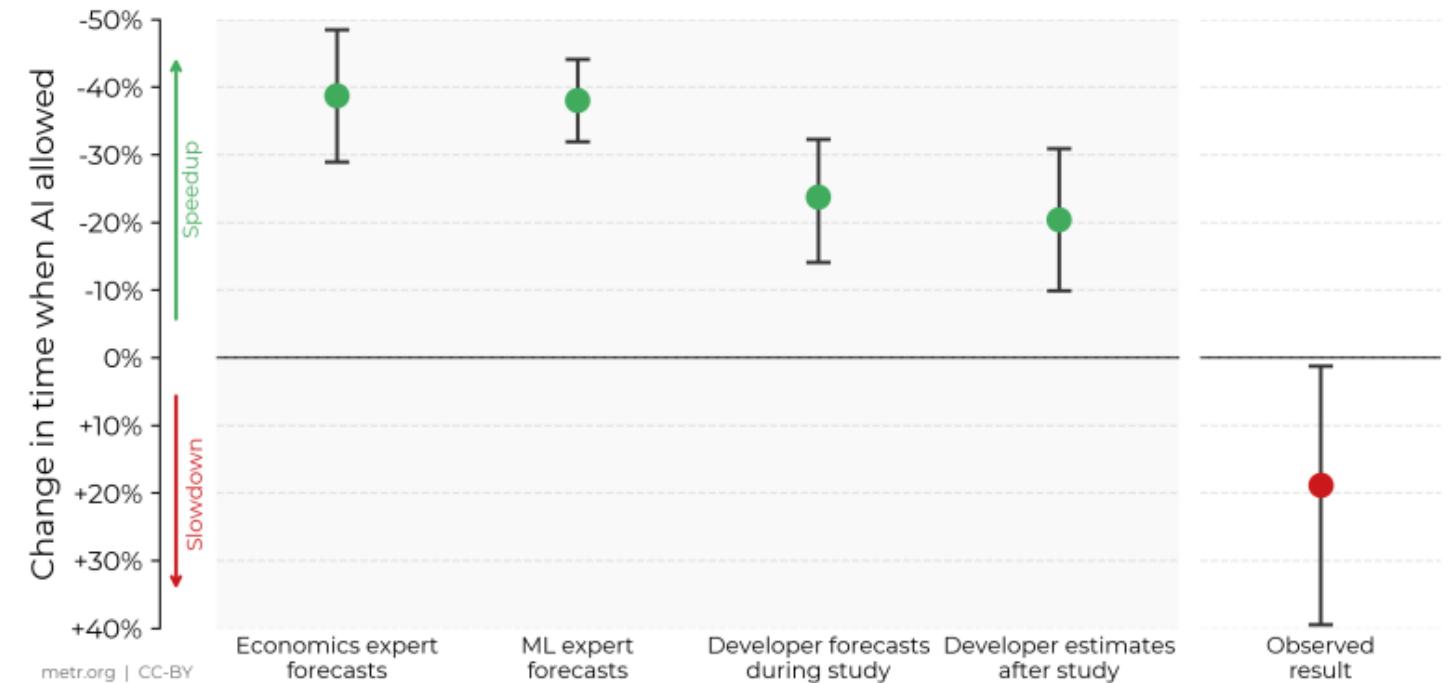
Encourage Human Learning of Advanced Coding Concepts

Massive Productivity Wins Come from the Aggregation of a Bunch of Smaller Wins

Team Working Agreements with AI

## Against Expert Forecasts and Developer Self-Reports, Early-2025 AI Slows Down Experienced Open-Source Developers

In this RCT, 16 developers with moderate AI experience complete 246 tasks in large and complex projects on which they have an average of 5 years of prior experience.





# AI ENABLING IN THE SDLC

A STRATEGY SAMPLER

Everything you built for enablement still matters in the AI era—  
everything you neglected now matters ten times more.

Evaluation & Awareness

Guardrails & Innovation

Golden Repositories

Shared Prompts

Structured SDLC Data

Loss of Authorship

Measuring AI Productivity

Cost Analysis

Systems Thinking

Human in the Loop

Unified Knowledge

API Experience (AX)

Fostering Team Skills

Agentic Orchestration

Artifact Planning

Traffic Flow & Gateways



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