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From AI Code Assistants to Trusted SDLC Agents

Geetha Ramachandran

Senior Director – Infrastructure & Productivity Enablement, FINRA



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About Me

Geetha Ramachandran

- Engineer → test automation → DevOps → AI & ML platforms
- Now leading Cloud & Platform Engineering and FINRA's AI SDLC transformation



★ *Builder at heart — 3× FINRA Createathon winner · 4 years coaching hackathon teams*

Agenda

01

Where we started

From an IDE assistant to the real opportunity across the SDLC

02

What we built

The building blocks of trusted, governed SDLC agents

03

Where are we headed ?

Trust, results, and the road ahead

What We Do



What We Do

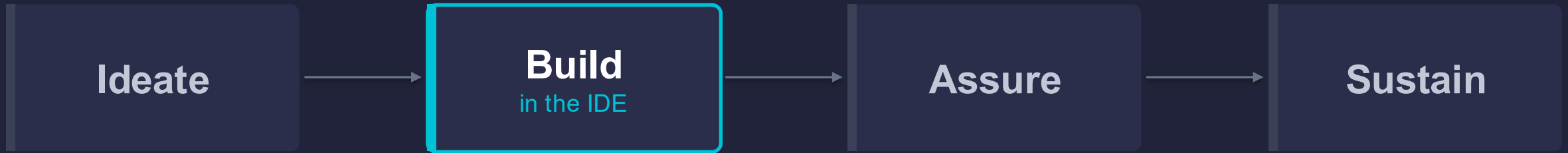
FINRA surveils equities and options markets for fraud, manipulation and insider trading.

FINRA oversees over
630,000 brokers
at
3,200 securities firms.

FINRA processed a peak volume of
1.45 trillion
market events in a single day.

FINRA manages approximately
500+
Petabytes
of storage.

Where we started with AI in SDLC?



2,300

software components

share one delivery capacity

What was the real opportunity?

Expand AI across the software development
lifecycle to grow delivery capacity
— advancing our mission and modernizing
our technology in parallel.

Where are we now?



ADOPTION

1,410

monthly active AI users*



TOIL REDUCTION

634

agentic migrations (66% of 960)



SCALE

6

SDLC agents in production



LEVERAGE

2×

pull requests (agent-assisted)

What did it take to get here?

THE BUILDING BLOCKS

01

AI Coding Agent

adopted

02

**Prototype
Publishing**

idea to working prototype

03

Agent Platform

skills · MCP tools ·
infrastructure

04

SDLC Agents

modernization at scale

GOVERNANCE & GUARDRAILS woven through every block

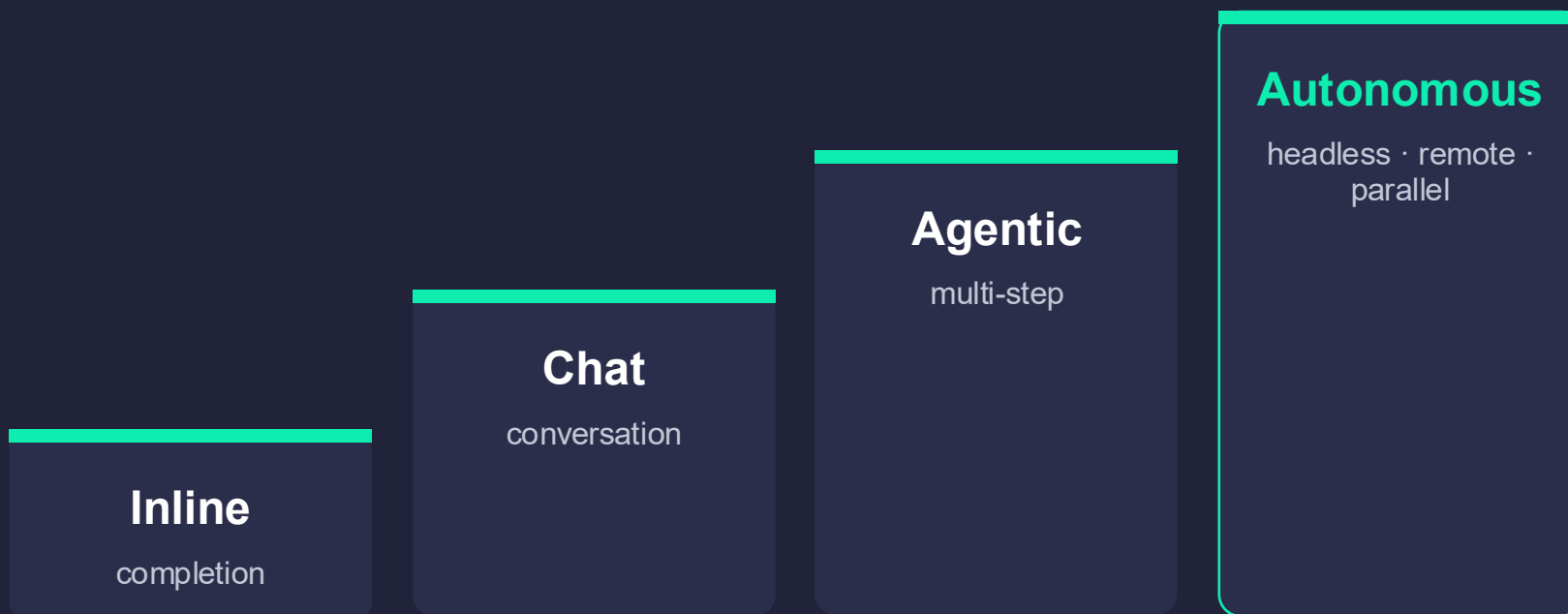
Coding Agent

Prototyping

Agent Platform

SDLC Agents

What changed in the tool itself?



MORE AUTONOMY →

Coding Agent

Prototyping

Agent Platform

SDLC Agents

How do we test an idea before we build it?

BEFORE

Early phases: 3–6 weeks

NOW

Days

idea → working prototype

WHO BUILDS

Engineering

Product

Business

444

prototypes built YTD

85%

faster: weeks to days

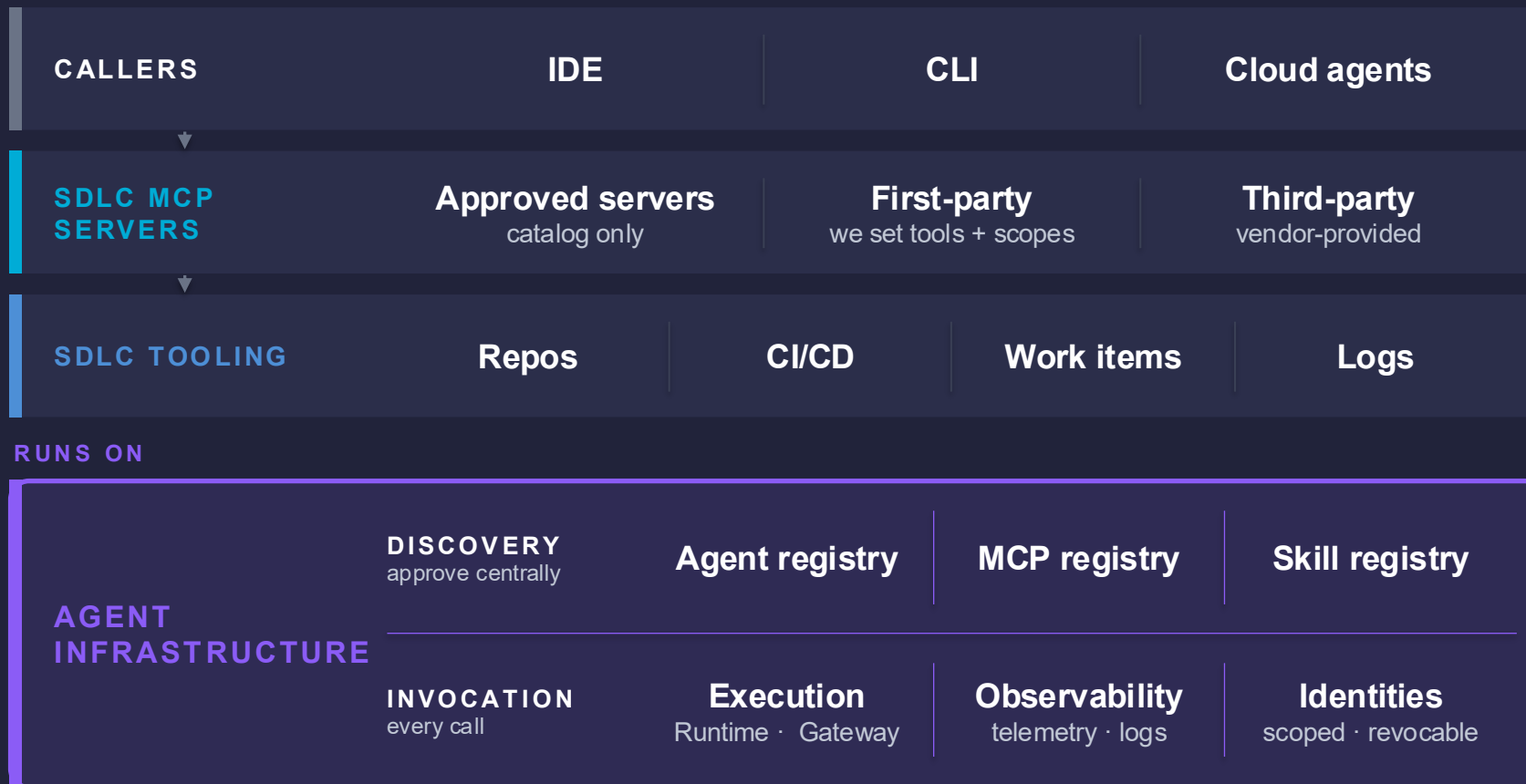
Coding Agent

Prototyping

Agent Platform

SDLC Agents

How do agents reach our tools, and run safely?



What do we build, and what do we buy?

Build for context. Buy commodity.

BUILT · FINRA DOMAIN-SPECIFIC

Dependency
Upgrades

Test generation

Runtime
Modernization

BOUGHT · COMMODITY BASE LAYER

General-purpose agents

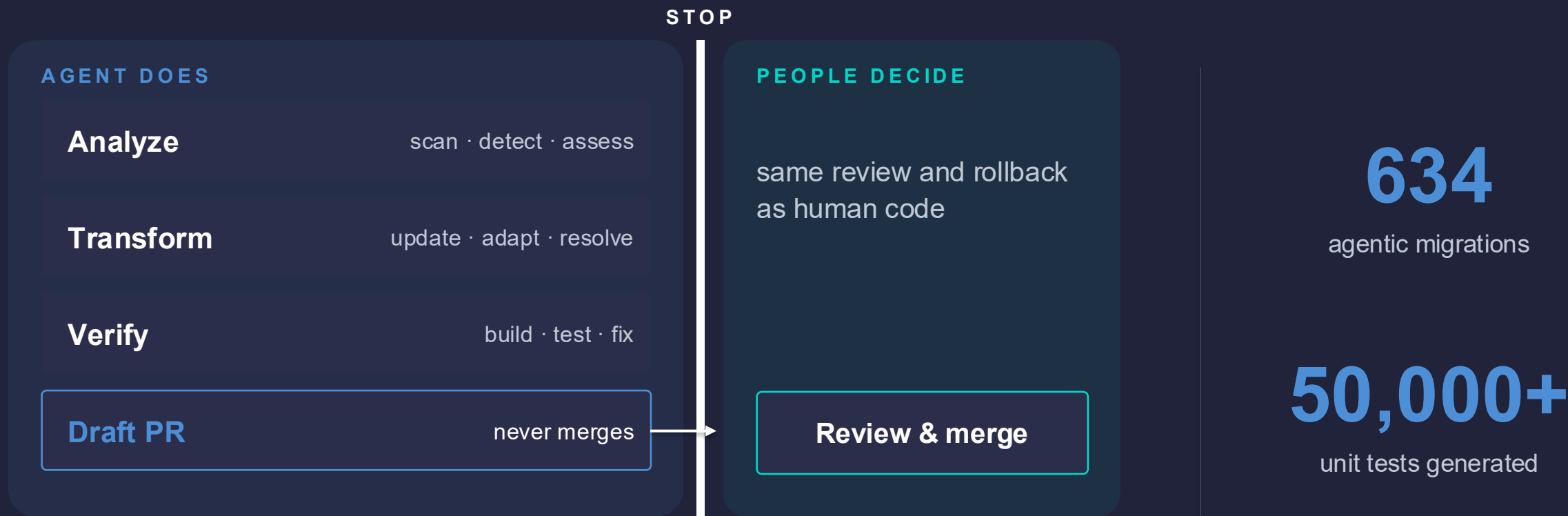
Coding Agent

Prototyping

Agent Platform

SDLC Agents

What work do our agents actually do?



634

agentic migrations

50,000+

unit tests generated

Why trust an agent to change our code?

Governed at every layer

	<u>GOVERNED ACCESS</u>	<u>VERIFIED & TRACED</u>	<u>PEOPLE IN CONTROL</u>
AI Coding Agent	Acceptable use · allow/deny · sandbox	Prompt logging · no retention	Human review
Prototyping	No prod path · data limits	Central hosting + logs	Must Go through AI-SDLC engineering
Agent Platform	Security scan · skills lifecycle	Validated · audited · observable	Versioned · revocable
SDLC Agents	Scoped repo access	Build + tests pass · traced	Draft PR, never merges

How did adoption actually happen?

Three formats, three audiences

Vibeathons

QUARTERLY

24 hrs

to a working prototype

Skills campaign

ONGOING

211

contributors

Transform-a-thons

MONTHLY

100%

completion rate

Structured time. Real support. A visible path to production.

Did it work?

DELIVERY PERFORMANCE

65.6 → 78.3

DORA score across 334 applications

Elite band

CAPACITY RETURNED

~1,800

engineering hours reclaimed

Self reported across 25 teams

What did we learn?

OUR ARCHITECTURE CHANGED TWICE



01

Don't use an LLM for deterministic work.

02

Improve through observed signals.

03

Agents amplify the process you already have.

Where are we headed next?

Knowledge and context graph

Gateways and Policies in Agent Platform

**Standard SDLC Agent Skills
for verification loop**

AI-SDLC Bootcamp

From AI Assistants to Trusted SDLC Agents

Build where your context is the differentiator.

Govern every layer, not the last one.

Keep people in control by design.