

SHIP-HATS Gen-AI Coding Assistant Programme

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Agenda

01

Recap of Progress

02

Key Trends

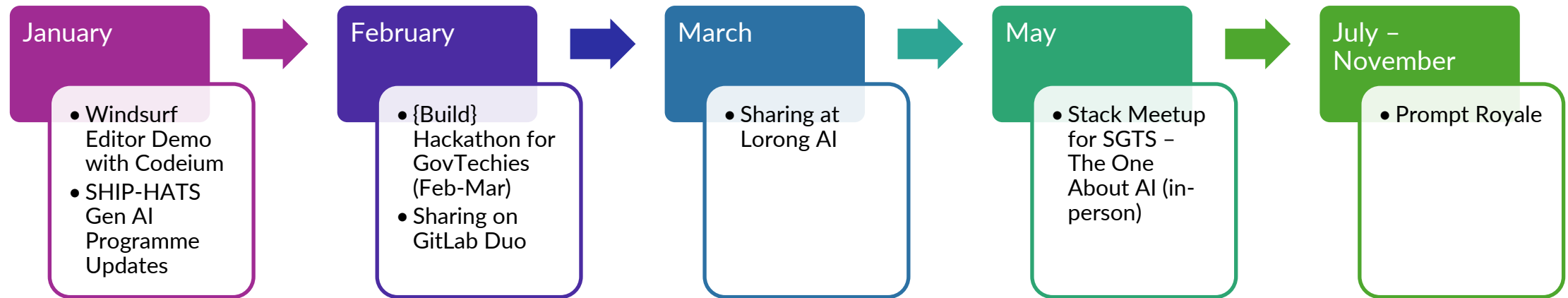
03

What's Next



What We've Done – Programme Overview

- Launched the Coding Assistant Programme in early 2024
- Our goal was to explore whether AI tools could meaningfully reduce coding time and improve developer experience
- Initial tool evaluation, pilot deployments, and now, integration with SHIP-HATS and other CI/CD platforms.



What We've Done – Tools Piloted & Made Available

Code Class	Device	Tool	Availability	Remarks
Official (Open)	Government managed device (GMD) like SEED or personal devices	Any tool in the market		
Official (Closed)	Only on Government managed devices (GMD) – with training of data turned “off”	Pilot with other tools – 19 users across 8 tools V0.dev, Replit, Lovable.dev, ChatGPT Plus, Claude + Artifact, CursorAI, Wind Surf and Zed	Pilot for “Open” Classification	Pilot Closed
		Windsurf (trial)	Trial (completed)	{build} Hackathon completed – will be made available as a restricted level offering
		Amazon Q Dev (pre-trial stage)	Trial – not available yet	
Restricted	Only on Government managed devices (GMD)	GitHub CoPilot*	Available	*Copilot Agentic Mode will be made available upon clearance
		Codeium Windsurf Plugin (SaaS)	Available	
		GitLab Duo	Available	
Confidential (Cloud-Eligible)	Only on Government managed devices (GMD)	Codeium (Self-Hosted)	Available -> to be deprecated, new solution to replace this	
Confidential	Secured devices like GSIB / Comet	TBD (GCC+; coming up in Q1FY25)	Not available yet	



What We've Done – Evaluation Results

Demographics



790+

Active
Developers

- 44+ Agencies
- 60% GovTech
- 80% Public Officer

Observations in 2025

- Observed **further improvements** in 2025 from the 21-28% increase coding speed observed previously in 2024.
- **Frequent usage strongly correlates** with gaining more productivity benefits
- Increased positive sentiments on productivity, learning, test coverage and code quality at both **individual and team level**



YES

Gain
productivity



YES

Improve
satisfaction



YES

Code Quality
Improvements



YES

Better Test
Coverage

New



YES

Learn
Rapidly

Updated

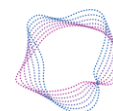


NO

Expose
vulnerabilities
early



2024 Study Publication



What's Happening – Key Themes

From Assistive
to Agentic AI

Deep
Contextual
Awareness

Security,
Privacy, and
Governance

Model Context
Protocol
(MCP)

Enterprise
Adoption
Momentum

Human-in-
the-Loop
(HITL)



What's Happening – Key Themes (1/2)

From Assistive to Agentic AI

Tools like GitHub Copilot and Claude are evolving from code suggestion to autonomous actions like PR creation and long-running coding tasks.

Deep Contextual Awareness

Deeper Contextual awareness to handle larger and more complex codebases.

Security, Privacy, and Governance

Prompt logging controls (GitHub), ethical safeguards (Claude), and shifts to SaaS/Hybrid (Codeium) reflect stronger compliance needs.



What's Happening – Key Themes (2/2)

Model Context Protocol (MCP)

Instead of full fine-tuning, tools like AWS Bedrock and Continue use structured metadata/context injection to improve output accuracy and adaptability.

Enterprise Adoption Momentum

Rapid uptake among tech firms (e.g., Cursor used by Stripe/OpenAI; GitHub now supports Claude) shows this is moving mainstream.

Human-in-the-Loop (HITL)

Despite autonomy, tools require human review (e.g., Copilot PR approval, Claude checkpoints), especially in regulated/government settings.



What's Happening – Tool Comparison

Tool	Notable Capabilities	Enterprise Features
Claude 3	Long context, agentic behavior, CLI integration	Constitutional AI, privacy controls
Codex	Full-stack dev automation, sandboxed tasks	Repo integration, secure cloud environment
Copilot	Pair programming, Copilot Chat	Custom policy controls, IDE-native
Codeium	Fast autocomplete, enterprise customization	Telemetry privacy
GitLab Duo	Git-native AI, MR summarization, planning insights	Deep CI/CD and workflow integration



What's Next

1. **Agentic AI Clearance & Experiments:** Clear for use with Restricted Code, experiment with task chaining, dev agent pilots (e.g. auto-MR, test repair)
2. **MCP Pilot:** Test internal model customization workflows (instruction tuning, RAG, monitoring)
3. **Platform-wide Integration:** SHIP-HATS templates, policy-aware SDKs, shared agent services
4. **Segmented Adoption:** Match tools to dev maturity, encourage opt-in + telemetry-driven rollout



Call-to-Action

- **Areas for collaboration:**
 - Model customization pipeline (data, infra, policy)
 - Platform-level integration of agentic workflows
 - Security reviews, telemetry framework
- **Open to partnerships with engineering, ML, security, and developer experience teams**
- **Sign-up for the Coding Assistants Programme here:**
<https://go.gov.sg/coding-assistant>



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