STM32Cube for Agentic AI

Boosting developer productivity

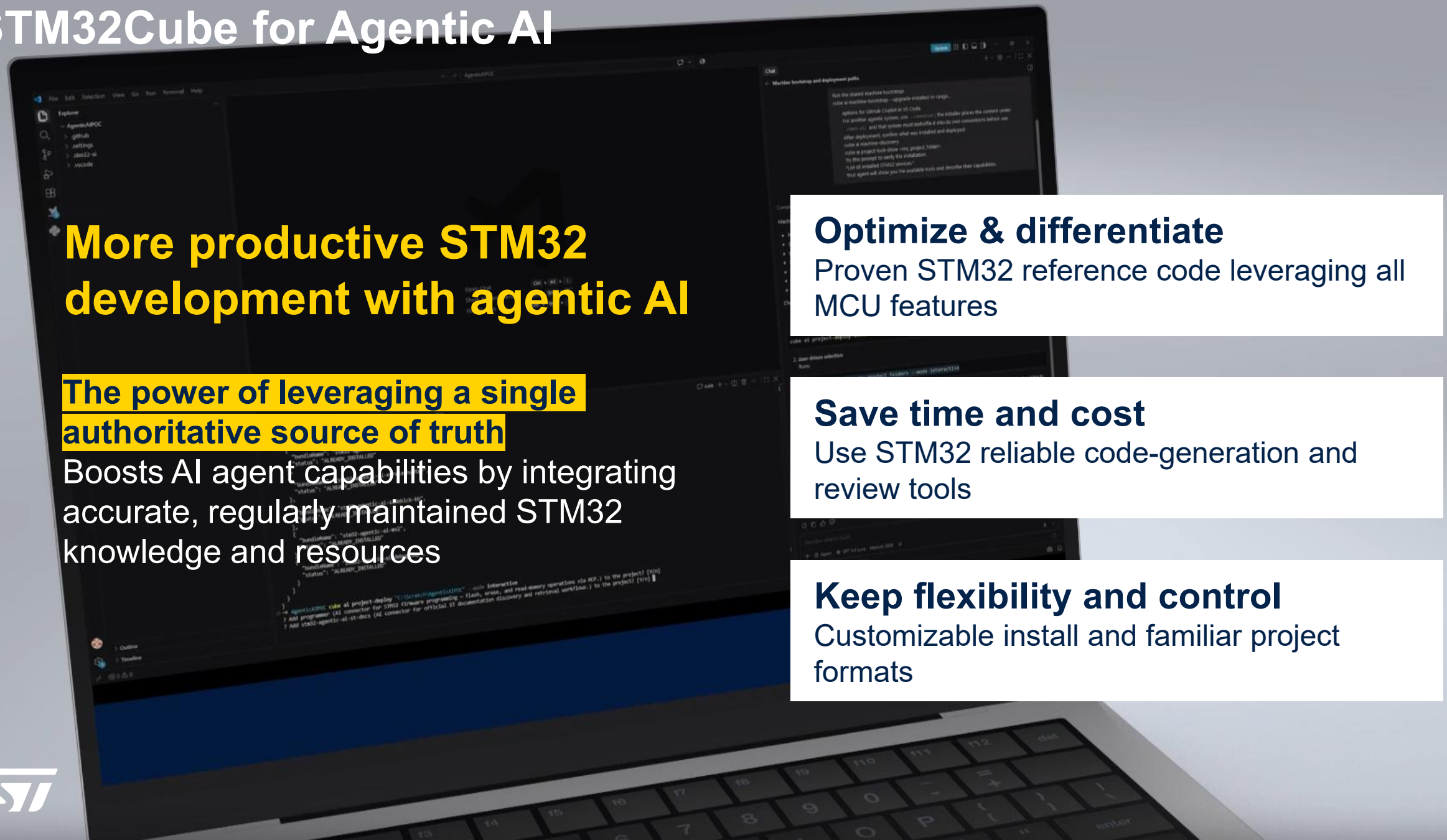
Reinforce STM32 leadership in agentic AI era



Faster development and design success by augmenting AI agents

- STM32 ecosystem as a single, authoritative source of truth
- Skills and MCP servers to leverage STM32 MCUs differentiators
- Accurate, regularly maintained STM32 knowledge and resources
- Complementing STM32 Sidekick, AI-powered assistant for technical support

STM32Cube for Agentic AI



More productive STM32 development with agentic AI

The power of leveraging a single authoritative source of truth

Boosts AI agent capabilities by integrating accurate, regularly maintained STM32 knowledge and resources

Optimize & differentiate

Proven STM32 reference code leveraging all MCU features

Save time and cost

Use STM32 reliable code-generation and review tools

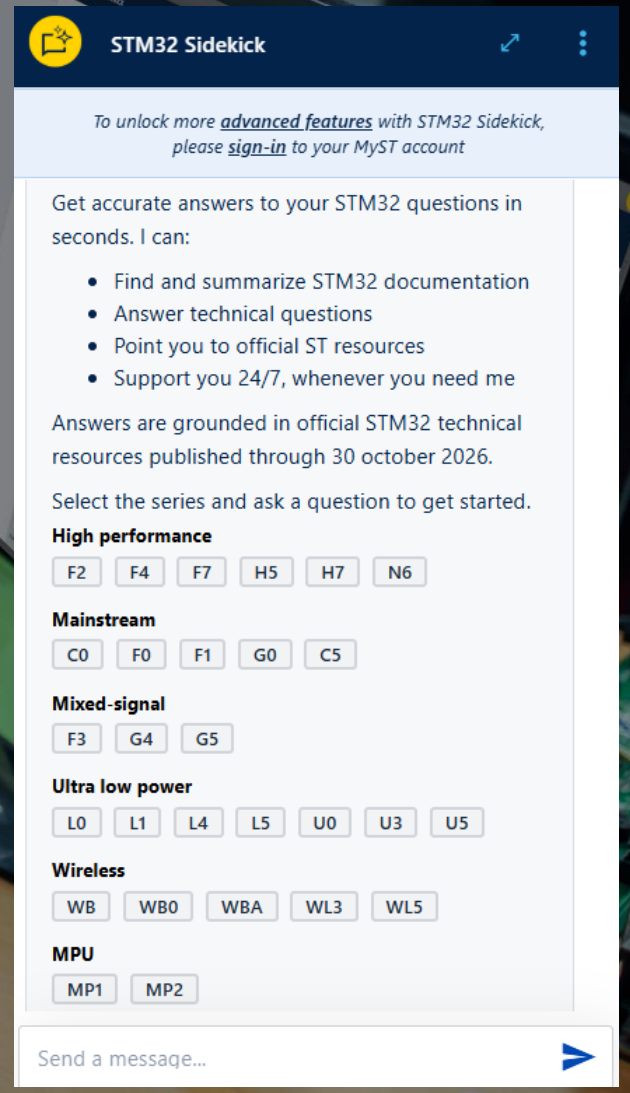
Keep flexibility and control

Customizable install and familiar project formats

STM32 Sidekick: extended support for faster design success

Your AI assistant for technical documentation

- 24/7 availability
- Instant answer to your questions
- Built and trained on the public STM32 resource base
- Clear and summarized answers
- References and links to the associated resources



More insights into STM32Cube for Agentic AI

STM32Cube for Agentic AI

Build with STM32 with knowledge-driven AI agents by your side



AI agents connectors

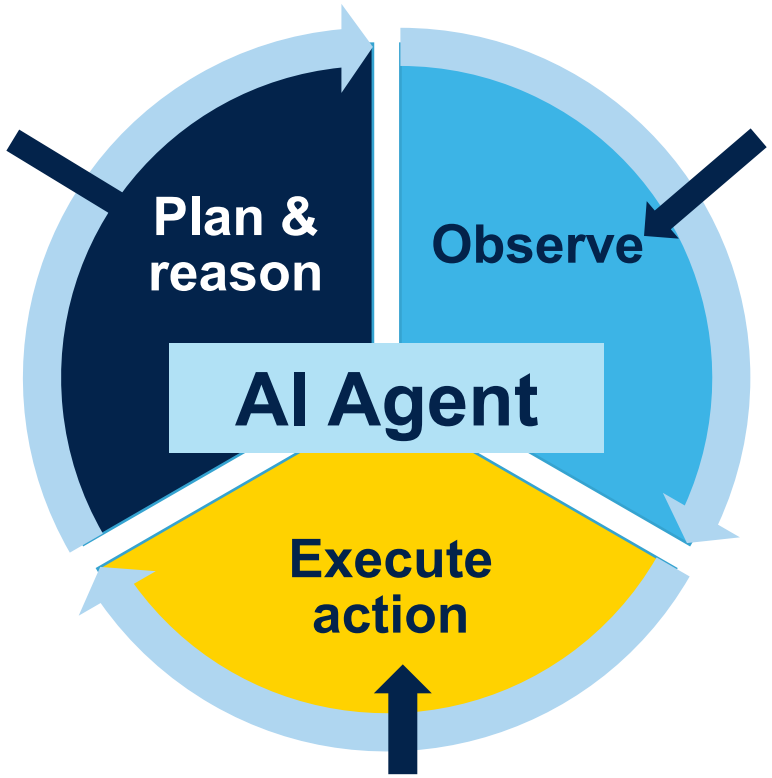
Delivering our deep expertise in STM32 MCUs to AI agents

Enhanced code



Augmenting AI agents with STM32 reference context

+ Skills
Teach an agent how to behave to perform a specific task



+ Resources (RAGs)
Augment agent performance by retrieving relevant STM32 data from external knowledge base

+ MCP servers
Allow the agent to leverage STM32Cube tools through a standardized client-server interface

Augmenting AI agents with STM32 reference context

Add the STM32 context to your GenAI flow

- STM32Cube ecosystem as a single source of truth
- Enhance agents with accurate resources, validated code and deterministic tools

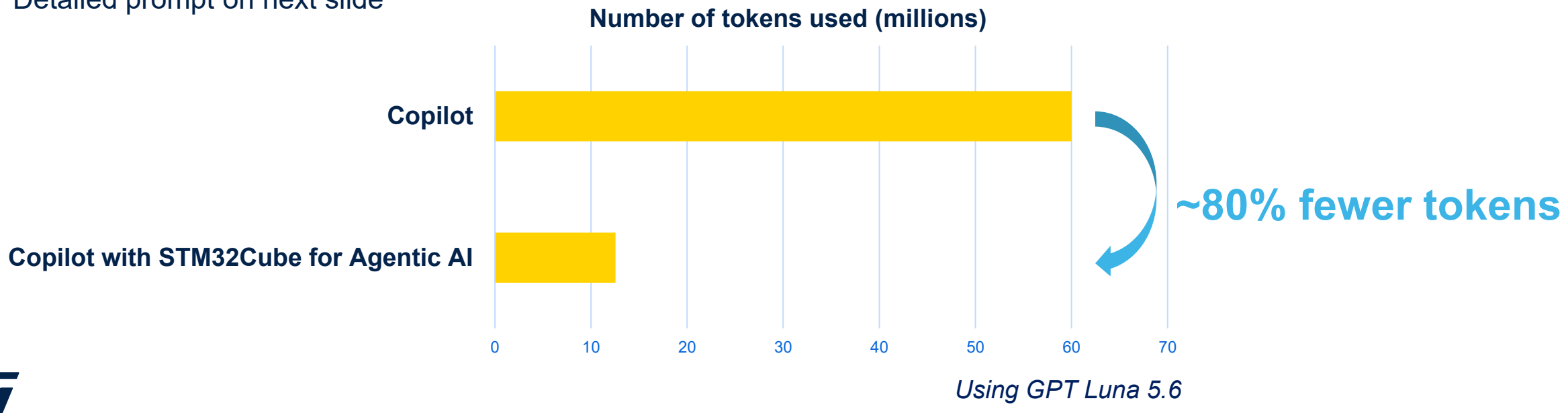
Efficient STM32 development with agentic AI

- Agent-agnostic tool
- Reduce hallucination risks
- Reduce token costs
- Easily take back control when needed

STM32Cube for Agentic AI

Project example

- Create a project on STM32C5 Nucleo board
- Sample temperature through with ADC through DMA and send data over the virtual com port each second
- Blink the LED at 2 Hz
- Add user button interaction for pause and resume data sent on virtual com port
- Check for applicable documented silicon errata and implement the recommended workarounds
- Get it running on the board
- Detailed prompt on next slide



Augmenting AI agents with STM32 reference context

First beta releases Nov 26

- Supporting **STM32C5, Copilot, Claude and Cursor** today
- Adding support for **STM32G5 and STM32H7P and TRAE** Nov 10th
- **More STM32 series** will be added in Q1 27

Released features

- Product selector and first-level support through **STM32 Sidekick**
- **Modular contexts** installation adapted to user flows
- Trusted MCU configuration through **STM32CubeMX2 AI connector**
- Enhanced code through **an AI connector for STM32 reference examples**
- **Code review** through API checkers and **Errata Hunter** features
- Automated build, programming, and debugging loops through **IDE AI connector**

STM32 Agentic AI Context

Copilot Claude CURSOR TRAE

Enhanced code



Our technology starts with You



Find out more at www.st.com

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