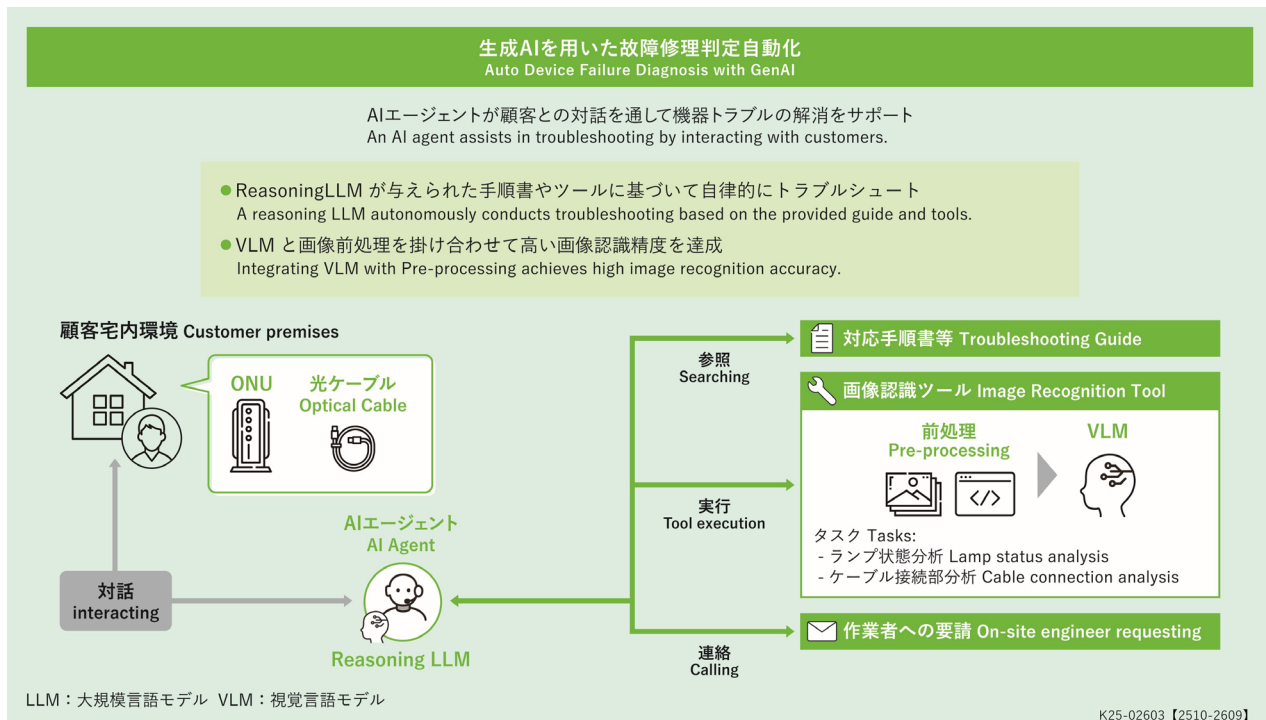Enabling users to conduct self-troubleshooting using LLMs and VLMs
Auto-device-failure diagnosis with GenAI

Background and Technical Challenges

Recent advances in LLMs/VLMs have simplified task automation and image analysis. However, these general-purpose models lack deep domain knowledge, making it difficult to build workflows or improve accuracy in specialized fields.

R&D Goals and Outcomes

We use GenAI to help customers troubleshoot home-fiber-device issues, reducing support load and improving CX

Key Technologies

01 Core Technologies

- Automation of fault diagnosis by AI agents
- Image-based device-status recognition using VLMs
- Prompt tuning
- User-friendly UI integration.

02 Key Differentiators

Although the AI agent system using a general-purpose VLM struggles with low accuracy, integrating a VLM, pre-processing, and an intuitive UI has enabled practical accuracy for real-world use.

Use Cases	Public Services & Local Government	R&D phase	Development
Technology Schedule	FY27–29	Commercialization Schedule	After FY30