

Lenovo PCCW Solutions

Agentic AI Workflow Management

The Journey to the New Era of Agentic AI

Powerful compute, advanced models and quality data

Machine Learning

e.g., CV, NLP

2017

LLM (Gen AI)

e.g., ChatGPT

2023

Agentic AI

e.g., intelligent agents

2025

2024

Lenovo Agentic AI with NVIDIA solutions

What Is Agentic AI?

An AI agent is a system that can be integrated into enterprise **workflows** and **applications** to **autonomously** make decisions, pursue goals, and take actions without direct human interaction, using the data it collects from its surroundings.

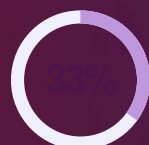


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By 2028:



15% of day-to-day work decisions will be made autonomously through agentic AI.¹



33% of enterprise software applications will include agentic AI, up from less than 1% in 2024.²

AI agents can improve workflow oversight, streamline and enhance integration between applications, and automate complex business workflows.

The top perceived benefits of agentic AI include:

58%

Improving oversight of business workflows

53%

Increasing integration among applications

52%

Automating complex business workflows

Sources

1 Gartner, Top 10 Strategic Technology Trends for 2025, October 2024

2 Gartner, "Forecast Analysis: Artificial Intelligence Services, Worldwide," August 2024

3 UiPath, 2025 UiPath Agentic AI Report, January 2025

Agentic AI Is Already Here

Agentic AI represents a new paradigm beyond Generative AI. While GenAI creates content based on a user's request, Agentic AI takes action. It executes complex, multi-step tasks with minimal human oversight, marking a shift from passive response to autonomous operation.



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Why it matters?



Autonomous Execution

- Agentic AI can make decisions, take actions, and refine outcomes on its own.



From Assistant to Partner

- It doesn't just support workflows—it drives them, making it a true digital collaborator.



Seamless Integration Across Systems

- Connects and synthesizes data from multiple sources for end-to-end task completion.

Business Benefits

1. Unprecedented Operational Efficiency

- Automates complex workflows to reduce manual intervention and costs, enabling teams to focus on strategic initiatives
- Empowers scalable, AI-driven operations across industries

2. Superior Strategic Decision-Making

- Improves decision accuracy with real-time, adaptive reasoning.
- Accelerates scenario-planning cycles and business response times.

3. Scalable Growth and Innovation

- Drives transformation across industry and functional areas (e.g., customer care, IT operations, R&D)
- Unlocks new efficiencies, revenue streams, and competitive advantages through personalized customer engagement and multi-agent collaboration

AI Agent

Types of AI Agents

- **Reflex Agents**
React based on predefined rules.
- **Goal Based Agents**
Act with objectives in mind.
- **Utility Based Agents**
Optimize for the best possible outcome.
- **Learning Agents**
Continuously evolve using past experiences.

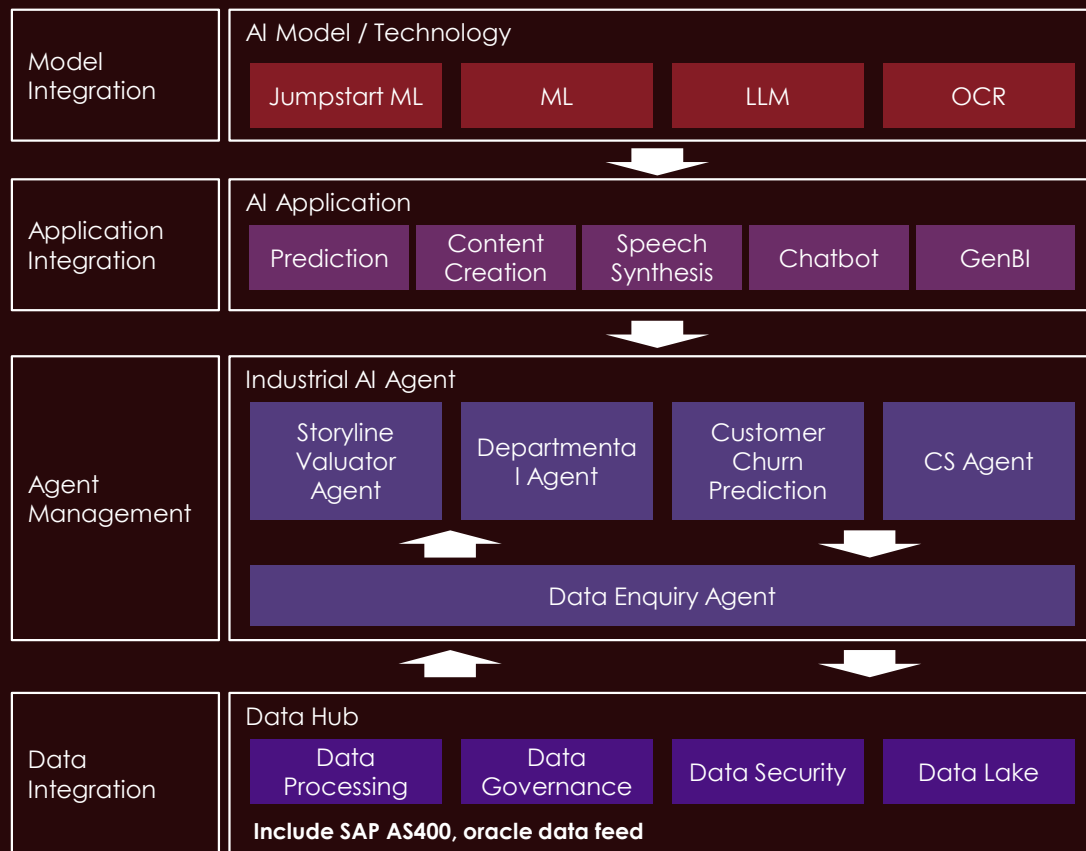


AI Agent Architectures

- **Single Agents**
Work independently (e.g., Siri, ChatGPT).
- **Multi-Agent Systems**
AI agents collaborate (e.g., autonomous vehicle fleets).
- **Human-Machine Agents**
AI assists humans in decision-making (e.g., AI-powered customer support bots).

As AI evolves, **multi-agent systems** will play a crucial role in **orchestrating complex workflows**, while human-machine collaboration will **augment decision-making** in industries like healthcare, finance, and automation.

Agentic Framework



LPS "Agenetic Platform" will be made to provide a structured platform to create, deploy, and manage multiple AI agents through different functions. It contains few stacks such as data integration, workflow management, model integration and technology integration. Some components inside are reusable from what we made before.

We would first leverage available tools from Microsoft such as Azure AI, Autogen to operate that, there will be an orchestration to manage, monitor, and coordinate multiple AI agents working together.

Few products served inside are call "Industrial AI Agents" such as AI sales agent, AI CS/CRM agent, AI supply chain optimization agent, AI Demand forecast agent, (TBC)

Agentic Workflow Solution

- Agentic Workflow is an Agentic AI Orchestration Platform that designs, executes, and optimizes complex business workflows.
- Core Philosophy: We provide the orchestra conductor, not just the individual musicians.
- Agent Capabilities:
 - Natural Language Workflow Design
 - Dynamic Multi-Agent Orchestration
 - Seamless Tool & System Integration
 - Human-in-the-Loop Governance
 - Continuous Learning & Optimization



The Anatomy of an Agentic Workflow

Goal Definition: User defines the goal of the workflow

Agent Assembly & Planning: Orchestrator Agent analyzes the goal, breaks it down into a plan, and assembles a team of specialized agents, e.g.

- IT Agent (for software/licenses)
- HR Agent (for paperwork & systems)
- Facilities Agent (for desk/access)
- Manager Notifier Agent

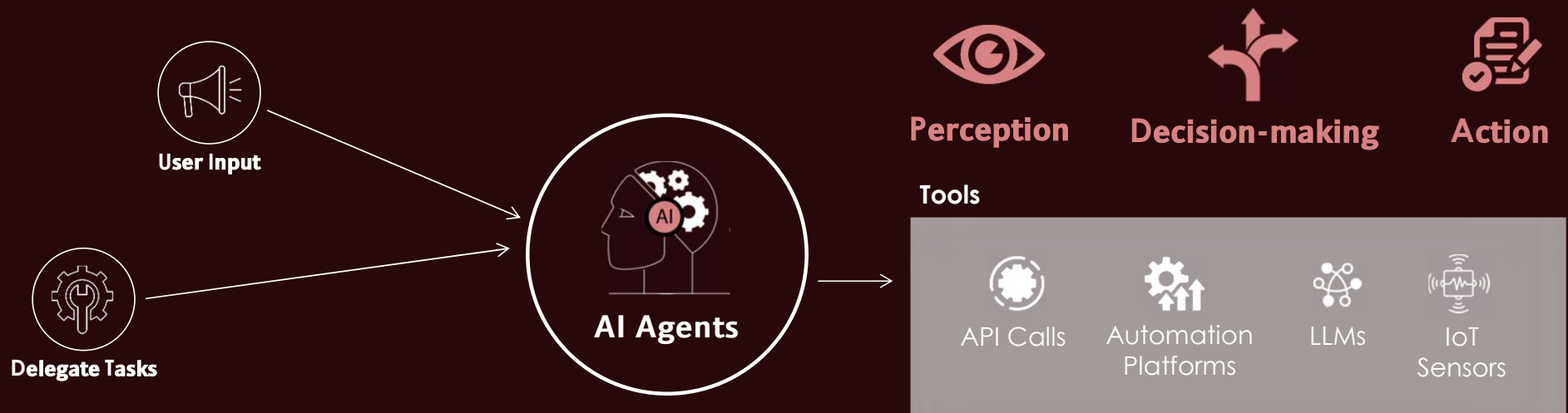


Execution & Tool Use: Each agent autonomously executes its tasks using integrated tools (e.g. Workday, ServiceNow, Email).

Collaboration & Problem-Solving: Agents communicate. If the IT Agent finds a software conflict, it consults the Orchestrator, which may prompt a human for a decision.

Completion & Learning: Workflow is completed. The system logs outcomes and refines its future plans based on success metrics.

AI Agent



AI is no longer just about models and algorithms—it's about **agents** that can think, act, and learn autonomously.

AI agents are **decision-making entities** that interact with their environment, process inputs, and take actions—just like human assistants but at machine speed.

How do AI Agents work?

AI agents operate in a **cycle of perception, decision-making, and action**, leveraging tools like API calls, automation platforms, LLMs, and IoT sensors. They handle **user input, delegate tasks, and take autonomous actions** based on memory and reactivity.

Story 1 – AI Site work

This AI-powered system is designed for **non-technical users**, helping to detect inspection failures and providing 24/7 quick fixes to mitigate risks. The multiple AI agents solution offers actionable recommendations for problem resolution and manages resources (people, tooling and materials)—ideal for **Construction site, Maintenance service provider, Power Plant, Facility management, Property management, etc.**



AI Agent 1

Abstract Role

Visual Inspection Analyzer

Processes images/videos from IoT devices, **detect** and **classifies** issues into predefined categories

Task Manager

Arranges resources (people, tools, materials), prioritizes tasks, and distributes effectively, then **drive** the fix

Improvement Advisor

Provides **recommendations** for further improvement, including enhancing detection and classification capabilities, and optimizing resource management, task prioritization, and distribution.



AI Agent 1

Story 2 - AI Storyline Validator (interviewer)

Storyline Validation System (SAVS) is AI-powered platform designed to help **non-technical users** collect, analyze, and unify complex narratives from interviews or conversations. By deploying multiple AI agents, it simplifies the process of gathering evidence and linking stories, detecting gaps, and validating the trustworthiness of stories, finally accelerate the discovery of truth—ideal for **police investigations, HR disputes, school incidents, news reporters, and more.**



AI Agent 3

Abstract Role

Transcriber	Converts speech to text, identifies speakers, and timestamps key events.
Sentiment Analyzer	Detects emotions (e.g., stress, anger) from voice tone and facial cues.
Fact Checker	Flags inconsistencies in a single person's story over time, unify the fact and story through logics and reasonings.
Cross-Reference	Compares stories across participants, external data (e.g., CCTV, emails) through AI model
Timeline Builder	Merges validated data into a single narrative, flagging unresolved gaps for human review.



AI Agent 3

Story 3 – AI inspection for B2B business

The AI-powered system is user-friendly for **non-technical users** in B2B trading, utilizing multiple AI agents that employs image and sound wave analytics for validation and follow-up actions. It can integrate with any scanning or inspection solution, and manage reminders based on validation results—ideal for **Inspection/notary services, supply chain, eCom commerce, and construction.**



AI Agent 2

Abstract Role



AI Agent 2

Validation Analyzer

Collect images and sound waves from IoT devices to identify any authenticity/defect with goods or confirm their condition is matching to what they order/expect for validation purposes

Goods Processing Manager

Streamlines the process of receiving or returning goods, ensuring efficient handling based on the identified condition

Improvement Advisor

Provides recommendations for further improvement on validation precision rate

A photograph of a modern office interior featuring a multi-level atrium with glass railings and escalators. The image is partially covered by a dark purple overlay on the left side, which contains the text.

AI Driven – Digital Human Avatar Solution

Revolutionizing Customer Engagement

[Digital TSG]

The Engagement Crisis

- Digital experiences are broken. It's time for a "Human Connection".

- Current Issues:

- **Static & Impersonal:** Websites, apps, and chatbots feel robotic and frustrating.
- **Information Overload:** Customers and employees are overwhelmed with text and complex menus.
- **The Scalability Gap:** Providing 24/7 personalized human-like interaction is impossible and expensive.



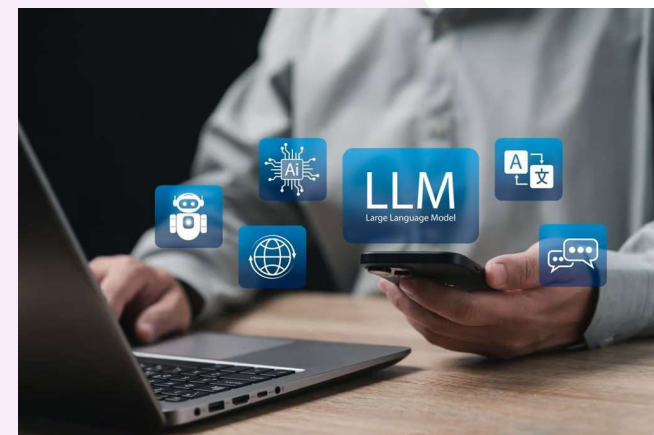
The Future of Human-Computer Interaction

- **More Intuitive & Emotional Interfaces:** Replacing complex menus with natural, conversational interaction that understands and responds to human emotion and nuance.
- **Universal Accessibility:** Making technology accessible to all through simple speech and gesture, eliminating barriers of technical literacy.
- **Hyper-Personalized Guidance:** Providing proactive, context-aware assistance that acts as a dedicated coach, support agent, or companion.
- **Immersive Digital Presence:** Serving as guides and representatives enabling authentic collaboration and social connection



The Next Generation of Digital Interaction is Here

- A cutting-edge AI Digital Human Avatar platform combining Hyper-Realistic Visuals with Advanced Conversational AI to create lifelike, interactive agents.
- They can see, listen, understand, and respond naturally in real-time, just like a human expert.
- Cutting-edge large language model (LLM) to power the natural language interactions
- Driven by AI backed by client provided specific knowledge



We bridge this gap. Imagine a tireless, infinitely scalable, and deeply empathetic brand ambassador, trainer, or support agent, available anytime, anywhere.

How It Works - The Magic Behind the Avatar

- **See & Hear (Perception):** Camera and microphone input with Speech-to-text (STT) technology to transcribe different languages (e.g. English, Cantonese or Putonghua)
- **Understanding (Cognition):** Natural Language Processing (NLP) powered by AI LLM.
- **Reasoning (think):** Powered by AI pre-trained model with Retrieval Augmented Generation (RAG) using clients propriety knowledge to generate a contextual, intelligent response.
- **Respond (Expression):** Text-to-speech (TTS) technology with lifelike speech with synchronized lip-sync and natural facial animations.

Perception

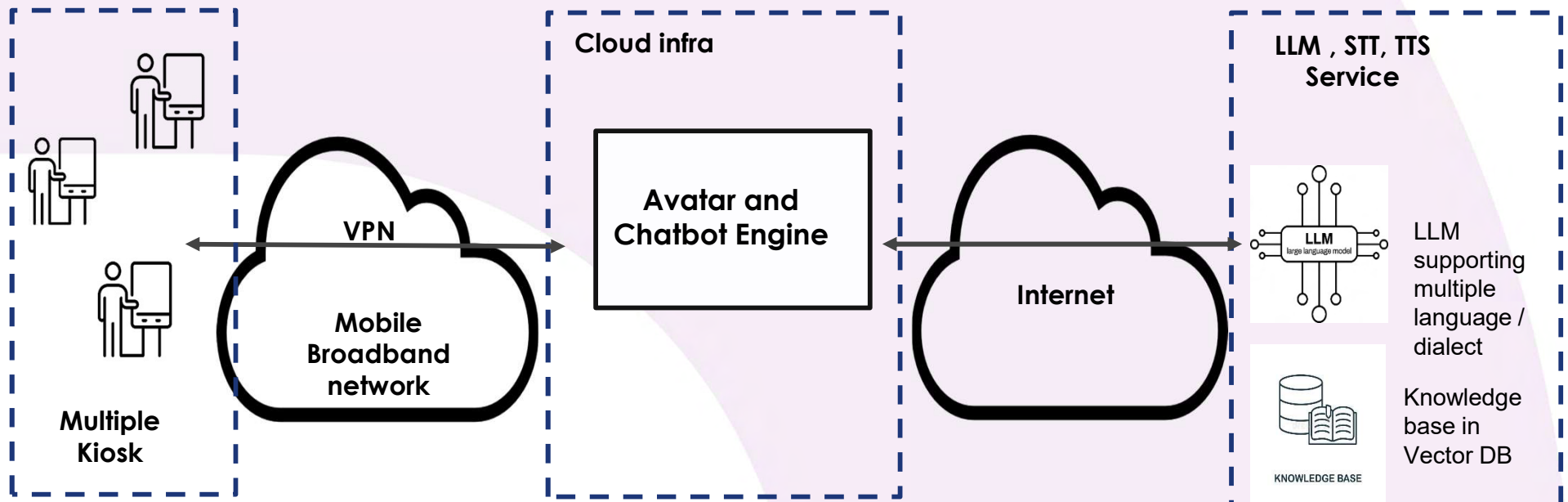
Understanding

Reasoning

Response

Our technology stack is built on four core pillars, creating a seamless and believable human-like interaction that learns and adapts.

Reference Solution Architecture



Software stack – Freedom to Choose, Power to Perform

We engineer solutions with a modular, API-driven architecture that provides unparalleled flexibility in component selection. This allows for the strategic integration of optimal technologies for each layer:

- **LLM Orchestration:** We select and fine-tune the most suitable Large Language Model—whether open-source or proprietary—to match your specific requirements for tone, domain expertise, and cost-efficiency.
- **Voice Interface:** We seamlessly integrate high-fidelity Text-to-Speech (TTS) and accurate Speech-to-Text (STT) services, choosing providers that best deliver the desired voice personality, language support, and latency performance including common languages like English, Cantonese or Putonhua.
- **Knowledge Integration:** Our solution is grounded in a vector database, which acts as a dynamic long-term memory. This enables real-time retrieval of relevant, proprietary information from your knowledge base, ensuring the AI's responses are factual, contextual, and deeply integrated with your data.

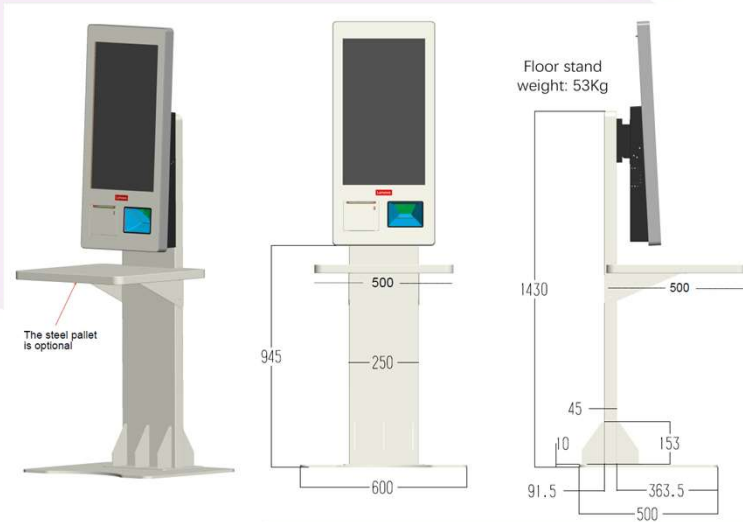


Our approach is to design a flexible technology stack that aligns perfectly with your use case and strategic goals

Kiosk hardware – choices to suite your use case

- We are technology agnostic and provide different choices of hardware kiosk for different usage scenarios (big or small, wall-mounted or floor stand)

HS-MT-240 (24 inches)
Self Service Kiosk
Resolution: 1920 x 1080



ST-S550 (55 inches)
LCD Floor Standing Display
Resolution: 3840 x 2160



Key Benefits - Transform Your Business

- **To Provide Instant, Multilingual Information Access**
 - 24/7 real-time answers to frequently asked questions
- **To Enhance the Customer Experience and Reduce Staff Workload**
 - Deflecting common enquiries, allowing human staff to focus on more complex and personalized guest needs.
- **To Ensure Consistent and Accurate Information Dissemination**
 - Centralize information updates (e.g., product information, pricing, announcements) and ensure every customer receives the same correct information.
- **To Create a Modern and Innovative Brand Image for your business**
 - Project a forward-thinking, tech-savvy image by implementing cutting-edge AI and interactive technology, enhancing the overall prestige and perception of your organization.

Reference – National Games Digital Human Avatar

- **Objective:** To enhance the visitor and citizen experience during the National Games by providing instant, interactive, and multilingual information assistance at key stadium locations, reducing the burden on human staff and ensuring a smooth, engaging event.
- **5 Kiosks** were put in different stadiums to provide services to citizens, visitors and persons with accessibility needs
- **Core Functional Capabilities of the Kiosks**
 - **Interactive Q&A:** Answers FAQs about the Games, schedules, venues, and rules.
 - **Real-Time Information:** Provides live event results, and schedule changes.
 - **Multilingual Support:** Communicates fluently in multiple languages (English, Cantonese and Putonghua).
 - **Accessibility Features:** voice interaction with subtitles/closed captions with accessibility design

This use case demonstrates how Digital Human kiosks can serve as a scalable, efficient, and friendly interface to manage the high-volume information needs of a large-scale public event like the National Games.



Why LPS?



- ✓ **Wide array of services** with strong pool of IT professionals supporting bespoke development
- ✓ Solid **experience in agentic AI deployments** using different AI models and implementation strategies
- ✓ Proven record of delivering secure and cost efficiency **enterprise grade integration projects**
- ✓ **Technology agnostic** approach allow clients to deploy best-of-breed technology combinations
- ✓ **Reliable support** and maintenance services
- ✓ **Customer-first** integration and solution vendor

Data Engineering /
Processing



AI Model selection
& fine-tuning



LLM App Arc
Design



Application
Integration

A photograph of two women in an office environment. One woman, wearing glasses and a light blue shirt, is looking at a laptop screen. The other woman, with long dark hair and a grey shirt, is smiling and looking at the same screen. They are sitting at a wooden desk. In the background, another person is blurred, and there are office shelves. A large purple diagonal overlay covers the left side of the image, where the title text is placed.

Voice AI Agent – Meeting Assistant

Challenge seen in “meeting”

- It is time consuming to prepare meeting minutes after a meeting every time.
- Easy for participants to miss some highlight and details from meetings.
- Translation is missing for multilingual meetings

Therefore, we produce a AI Meeting Assistant to solve the challenge.

Challenges and Pain Points

Inefficiency in Minute Preparation

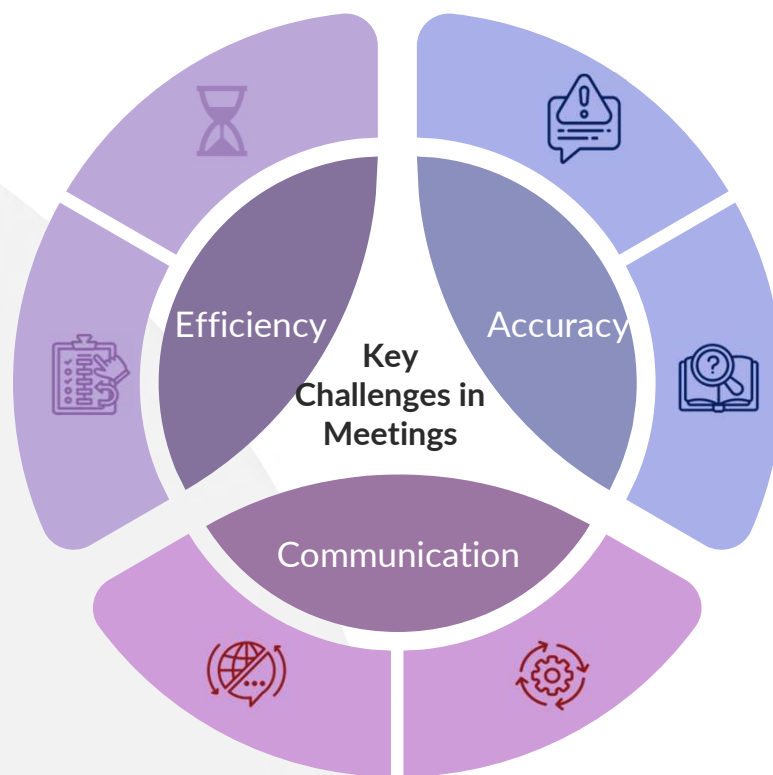
Manual documentation is time-consuming and prone to delays.

Difficulty in Tracking Follow-Up Actions

Lack of structured documentation makes accountability challenging.

Multilingual Communication Needs

Diverse language participation requires precise translation to ensure all voices are heard.



Inaccurate Transcriptions

Human errors can lead to missing key details and miscommunication.

Complex Terminology

Specialized jargon complicates discussions and can lead to misunderstandings.

Context Retention Issues

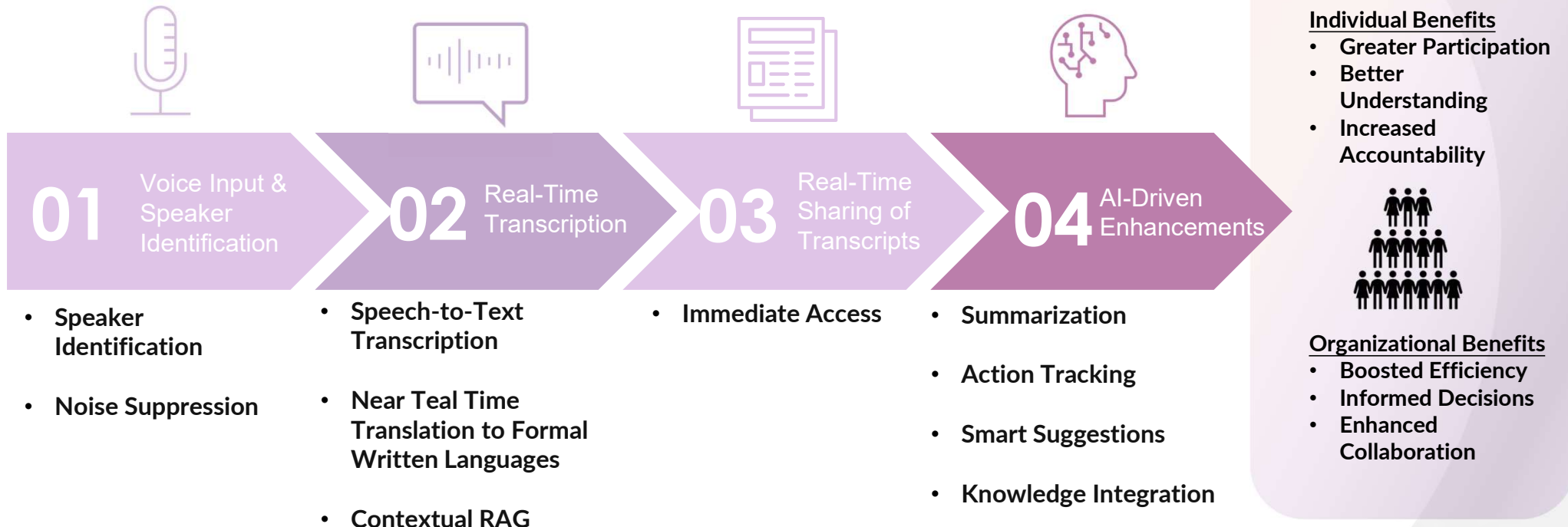
Maintaining continuity and understanding in lengthy discussions can be difficult.

Business value about AI Meeting assistant

- **Foster participation and engagement :** AI-powered live transcription and translation make meetings and events accessible to a broader audience.
- **Enhance Global reach:** Live AI translation breaks down language barriers, this capability accelerates market entry, supports customer support in any language. It is valuable for large-scale events, multinational meetings, and ongoing customer interactions.
- **Time saving and boost productivity:** Automated meeting summaries and minutes eliminate the need for manual note-taking, allowing participants to focus on discussions.
- **Accuracy:** AI meeting minutes generators use advanced speech recognition to produce accurate and reliable transcriptions, reducing human errors.
- **Cost and time efficiency: Improve user experience:** Real-time transcripts and translations provides customizable, searchable, and easy-to-access content across devices.
- **Data Driven insight:** Transcripts and translated content is analyzed to extract business intelligence and aggregate data to be more contextual such as customer sentiment, frequently discussed topics, quantifying values, and “brand” being mentioned. This data supports smarter decision-making, marketing strategy, and event planning.

Solution Overview

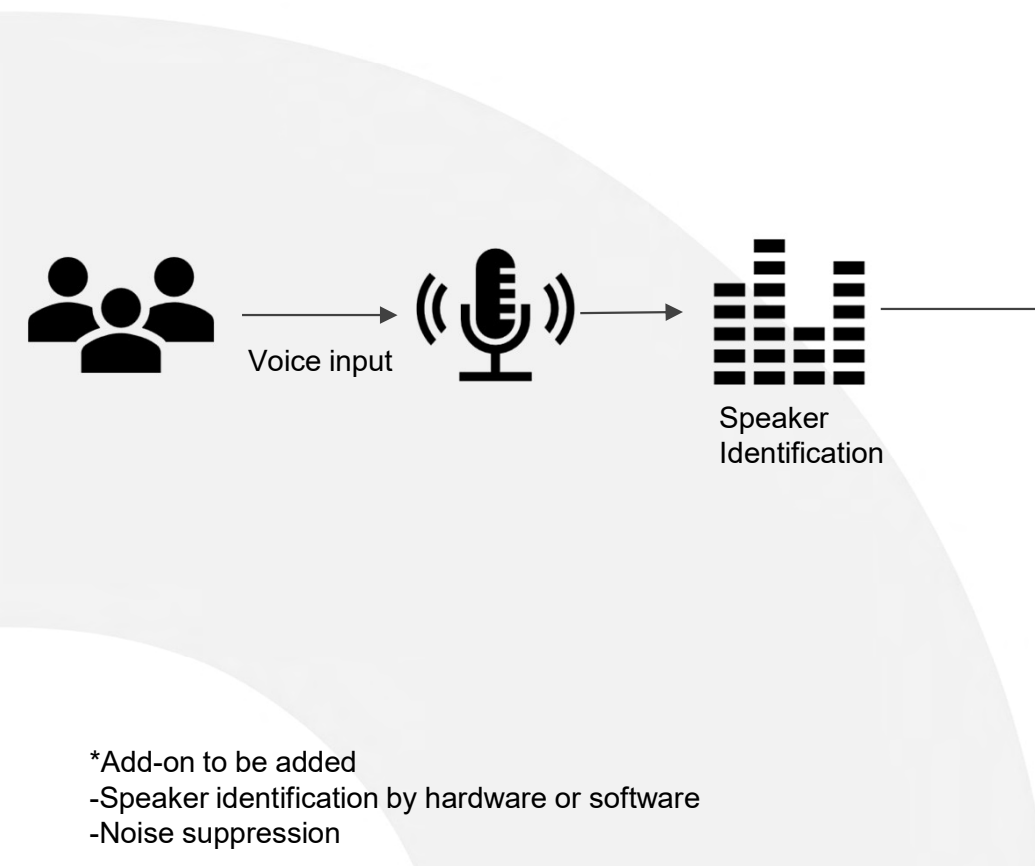
Key Features of the AI-Powered Meeting Assistant



The diagram illustrates the Speaker Identification process. It begins with an icon of three people, representing the source of voice input. An arrow points from this icon to a microphone icon, with the text "Voice input" written below the arrow. Another arrow points from the microphone icon to a bar chart icon, which represents the speaker's voice profile. Below the bar chart is the text "Speaker Identification". A final arrow points from the bar chart to the right, indicating the output of the process.

*Add-on to be added

- Speaker identification by hardware or software
- Noise suppression



- Speaker identification by hardware or software
- Noise suppression

Demo Video

LPS a Lenovo company

Voice AI Agent - Meeting Assistant Demo

Start Listening

Stop Listening

Summarize

總結

書面語總結

Summary

AI Customer Service Example

