MaaS Introduction

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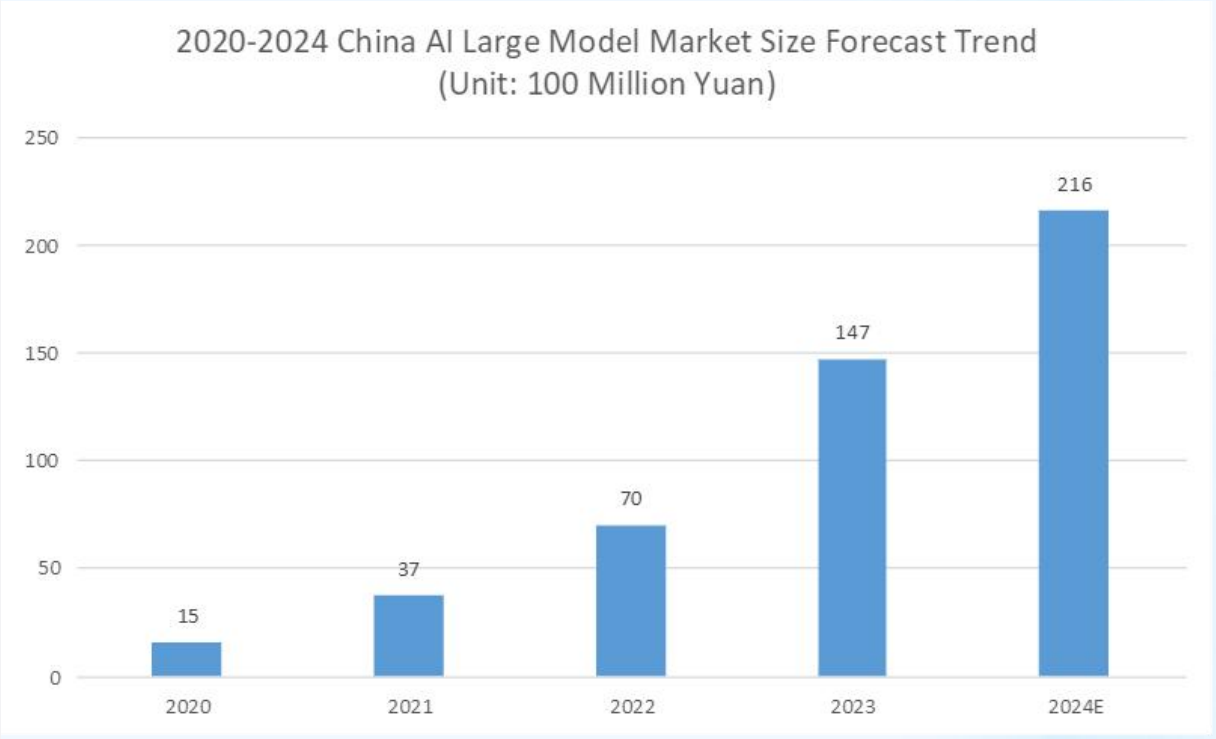
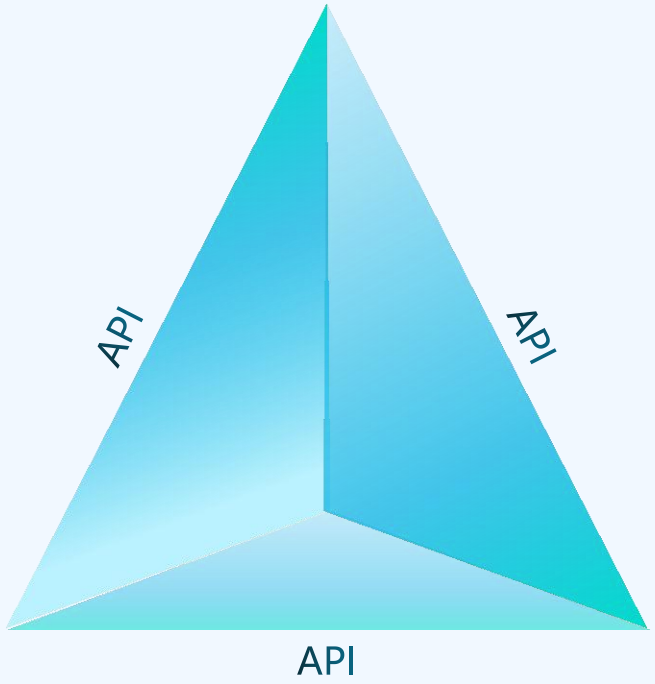
Global Market Demand

Source: Technavio



Source: China Commercial Industry Research Institute

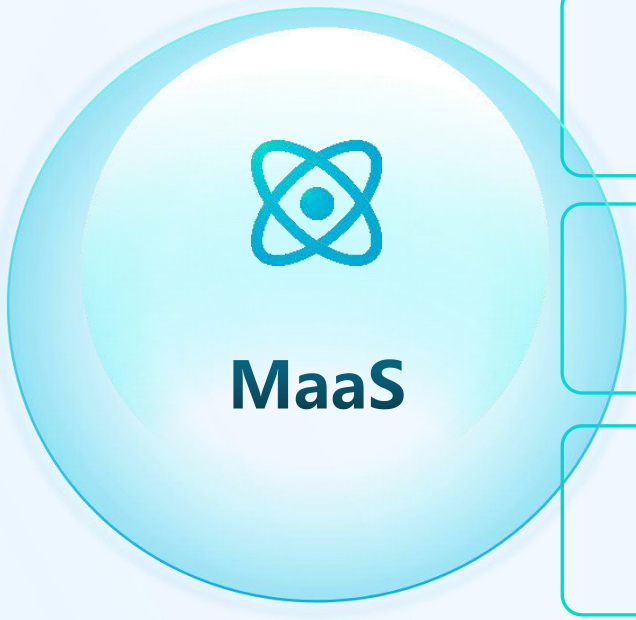
Roles in the AI Model Ecosystem



NOTE: Anyone (incl. communication service providers) may play any one or more roles in a single application.

What is MaaS

MaaS (Model as a Services) refers to the packaging of **AI models** and their **associated capabilities** into reusable services, enabling users to quickly and efficiently build, deploy, monitor, and invoke models without the need to develop and maintain underlying foundational capabilities.
Distinguished from traditional connectivity services, it is one of the IT and CT integrated services.



model inference service*

Cloud-based access to diverse models simplifies inference integration

application/agent orchestration service**

Models, datasets and tools accelerate AI application development

application/model DevOps management***

Lifecycle management ensures optimized model/agent services

*It is straighforward to combine the first inference service into teledcom cloud service.
**It is not necessary to bound the second orchestration service with cloud but any service orchestration entity.
***Whether the third management API belongs to the scope of GSMA OPG or TMF is to be discussed and confirmed.

Application Scenario #1

Chinese Clothing Enterprises

Purpose: enhance its globally operating self-service customer caring service with LLMs

Challenges:

- Data Privacy
- Cultural Sensitivity
- Technical Integration

Requirement:

- standardized large model services
- compliant with local regulations and cultures

documents, QA pairs →

← augmented LLM agents

Communication Service Providers

Input: scenario specific domain knowlege

Utilization: Large models, locally unique datasets, tools

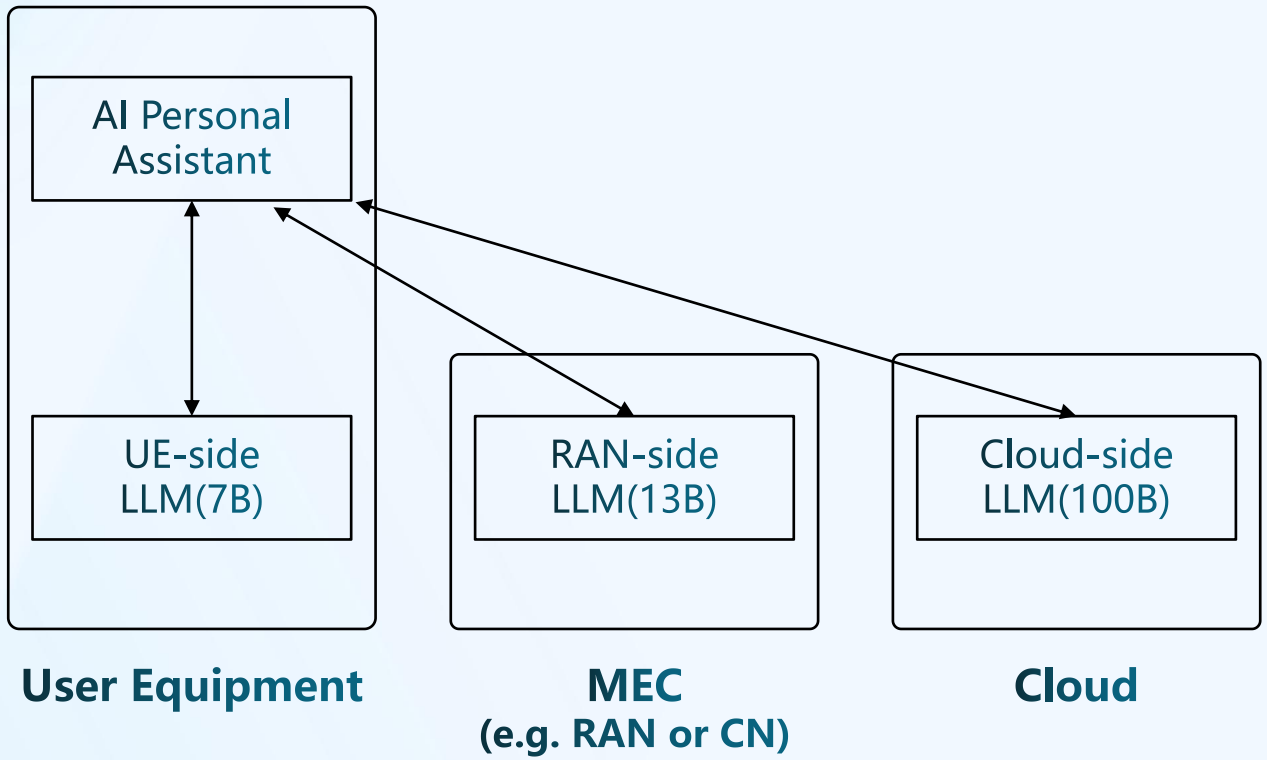
Output: Customer service application

Advantages:

- ✓ **Connectivity**
- ✓ **Security**
- ✓ Familiarity with **local culture and policies**
- ✓ Abundance of **local data resources** (including government policies, local user language habits, and language libraries)
- ✓ Use **standardized APIs** to ensure fast adaptation

Application Scenario #2

Flexible selection of LLMs at multiple sites: AI personal assistant on the user equipment can flexibly choose to invoke LLMs of different scales deployed on the **UE**, **RAN**, and **Cloud**.



The considerations for selection include:

- Computational resource limitations
- Network constraints
- Application requirements
- Energy efficiency

Draft Proposal

- API Portfolio: Cloud & Edge
- API Product Family: **MaaS**
- API Product: **Q&A Assistant APIs**

Knowledge Base - Manage

Requests params:
- name
- description
- document(doc/pdf/txt/csv)

Responses params:
- success or failure response
- knowledge base id

Q&A Assistant - Manage

Requests params:
- name
- description
- knowledge base id (optional)
- configuration prompt
- large model and parameters
- opening remarks (optional)

Responses params:
- success or failure response
- assistant id

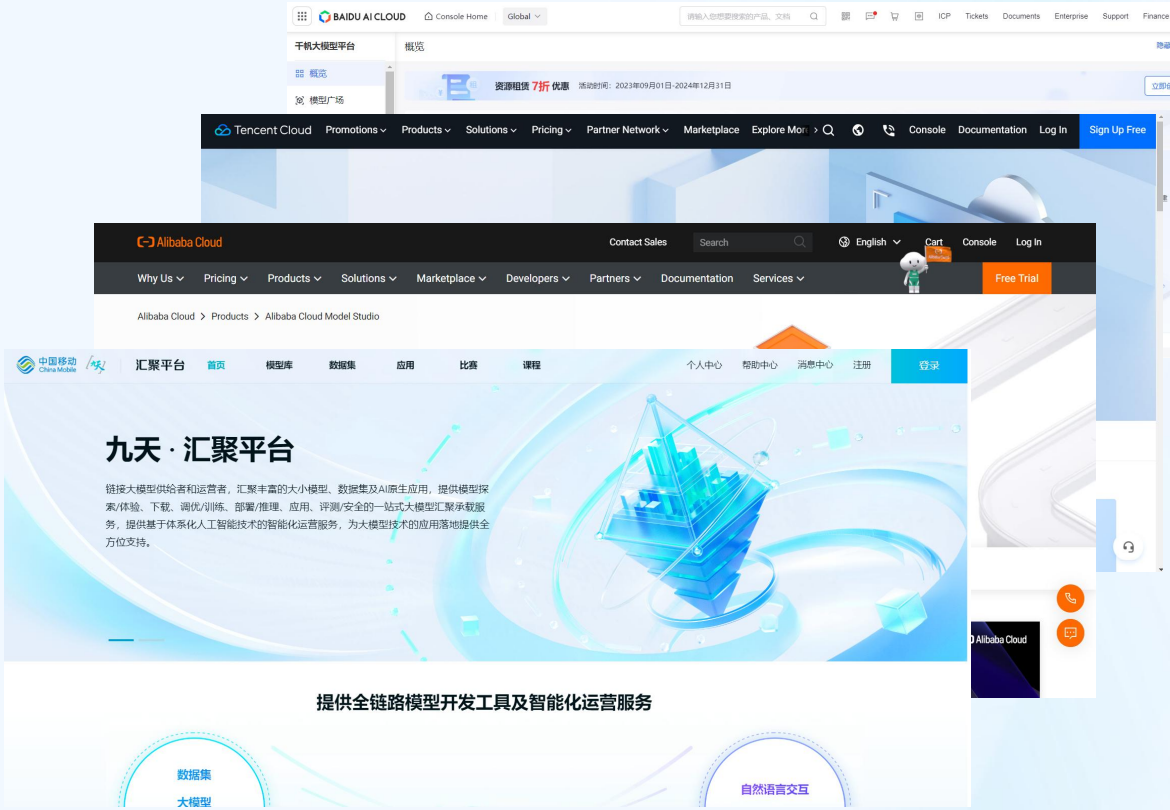
Q&A Assistant - Service

Requests params:
- assistant id
- prompt

Responses params:
- success or failure response
- finished(Stop / Length / Error / Filter)
- answer text
- reference (optional)

Feasibility

Global CSPs offering/developing
LLM-driven customer services



Cloud Service Providers and
Communication Sercie Providers offering
Model hub services in China

Takeaways

- LLM drives enormous global market, with great opportunities for MaaS operators.
- CSPs could take the role of MaaS operator by leveraging and amplifying **local connectivity & security** advantages.
- Global operating verticals/app developers would benefit from **standardized** MaaS APIs.
- CSPs **DON'T** have to be the LLM owner to provide MaaS service.
- It would cost **LITTLE** extra for CSPs who are already or planning to leveraging LLM for internal/customer-oriented enablement.
- It would of **HUGE** help for CSPs who are already or planning to providing LLM or LLM-enable service/applications for extending potential external market.
- It's **now or never**!

Thank you!

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