

PaaS To The Future!

- ▼ Modern AI First Architectures on Azure

Tessan Group – AICO – Tunis - November 2025

Chedy Missaoui

- Overall Software Enthusiast
- Technical Account Manager
- DevOps & Cloud Architect at Tessan Group

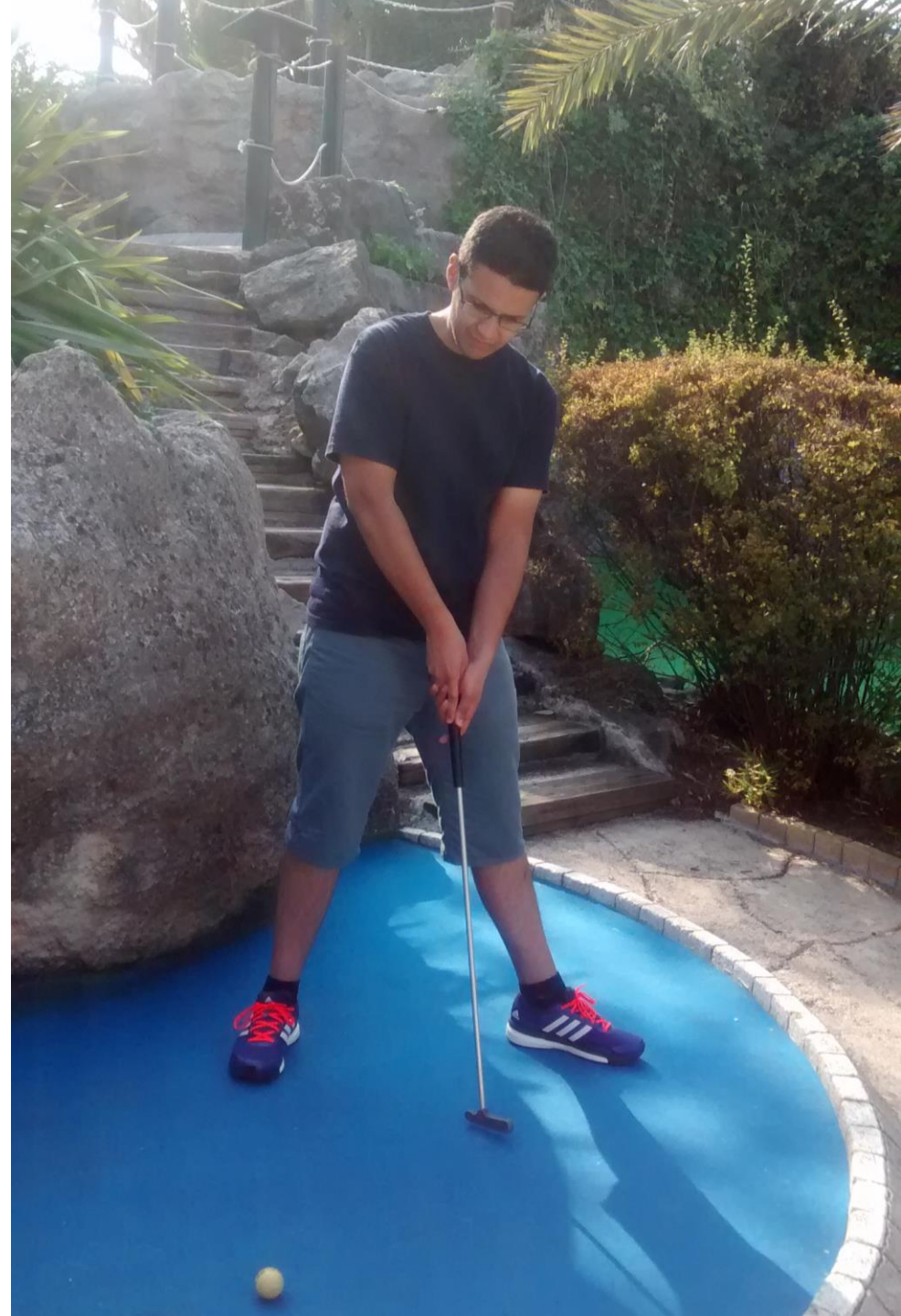
TESSAN GROUP
YOUR TRUST PARTNER

techdominator.com 

Chedy Missaoui 

chedy.missaoui@tessan.tech 

MissaouiChedy 



Outline

- AI in Every Business Process
- AI-First Shift
- Azure PaaS for AI
- Practical Example: Intelligent Customer Support App
- Best Practices and Considerations
- Closing Thoughts

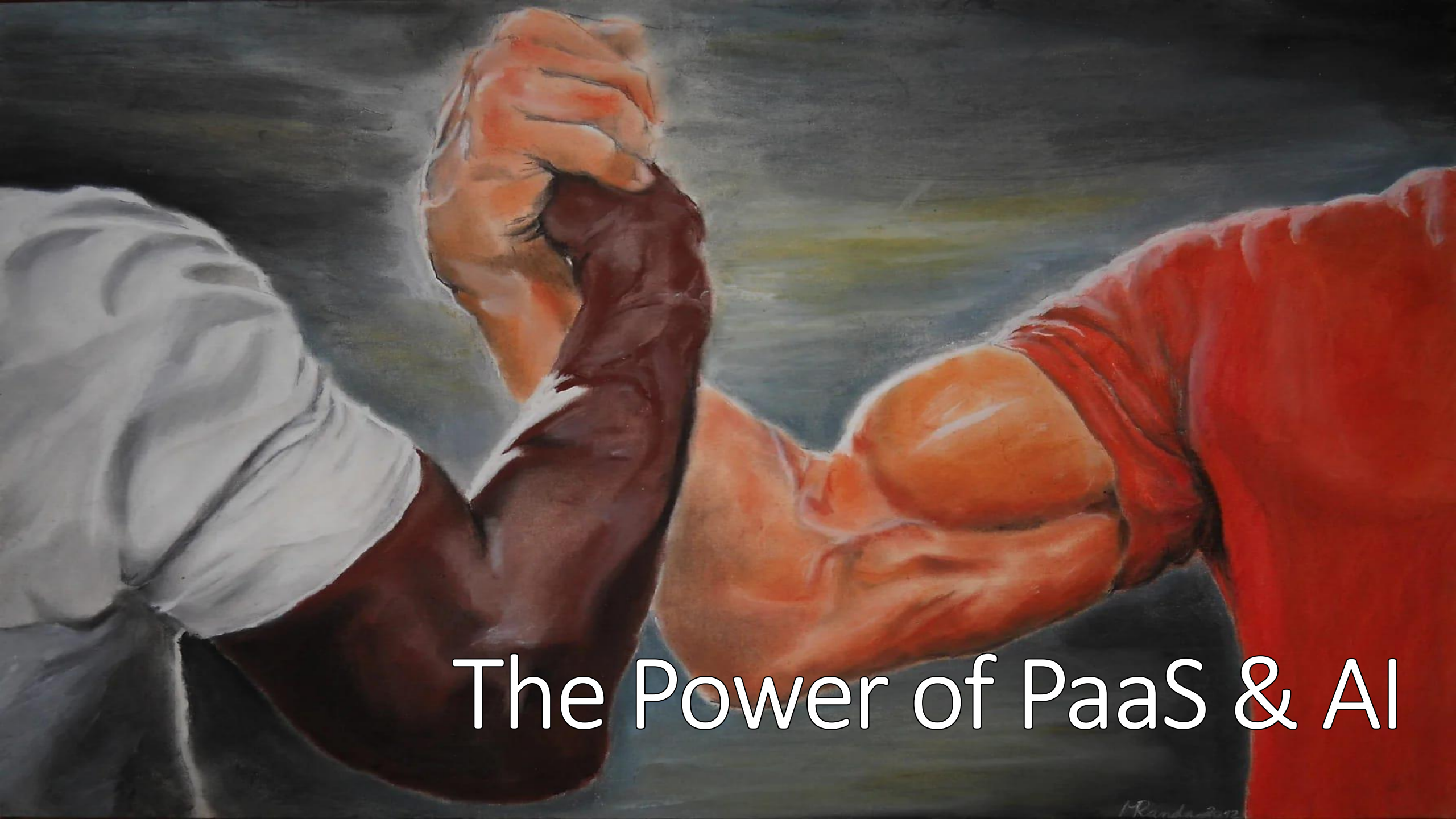
AI in Every Business Process

Azure Gen AI Services Timeline

- Nov 2021 – Azure OpenAI (Preview)
- Nov 2022 – ChatGPT release
- Jan 2023 – Azure OpenAI GA
- Nov 2024 – Azure AI Foundry

Azure AI Enterprise Ready

- Governance
- Security
- Scalability
- Cost control
- Time-to-market
- Maintainability



The Power of PaaS & AI

P. Randa 2012

AI First

*“AI is no longer a bolt-on
— it’s a **design
foundation.**”* (ChatGPT Quote)

From Trends to Transformation

- Mobile-First
- Cloud-Native
- Security-First
- **AI-First (NOW)**

In This Session

- Practical Points to understand AI First
- Available Services in Azure to implement AI First

AI First Shift

From Enhancement to Foundation

- *“SaaS is dead, the future is AI agents.” – Satya Nadella*
- Shifting from: Traditional => Enhanced => **AI-First**

Traditional Business Logic Era

- **Deterministic business logic**
- **Humans handling nuance**
- **Linear, well-defined workflows**

First Wave of AI



What AI-First Really Means

- AI is no longer a tool — it is the **primary actor**

Conversational UI

AI

API

Data
Sources

Designing with AI as a Core Actor

- How do we minimize human intervention?
- How do agents operate autonomously?
- How do we ensure safety, compliance, and ethics?

What Makes This Possible?

- LLMs: Reasoning, dialog
- Vision Models: Spatial understanding
- Predictive Models: Forecasting, anomaly detection
- Natural Language Processing Models

AI Agents as First-Class Citizens

- *“Creating agents should become as common as creating spreadsheets”*
- Azure is positioned to provide the capabilities to achieve this

Three Tiers of Azure AI Services

Low Code



Co-Pilot
Studio

Pro Code



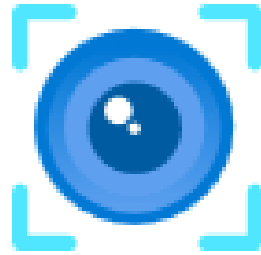
AI Foundry

Low Level ML



Azure
Machine
Learning

AI Foundry Manages Cognitive Services



Vision



Content Safety



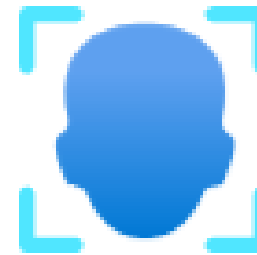
Document Intelligence



Speech

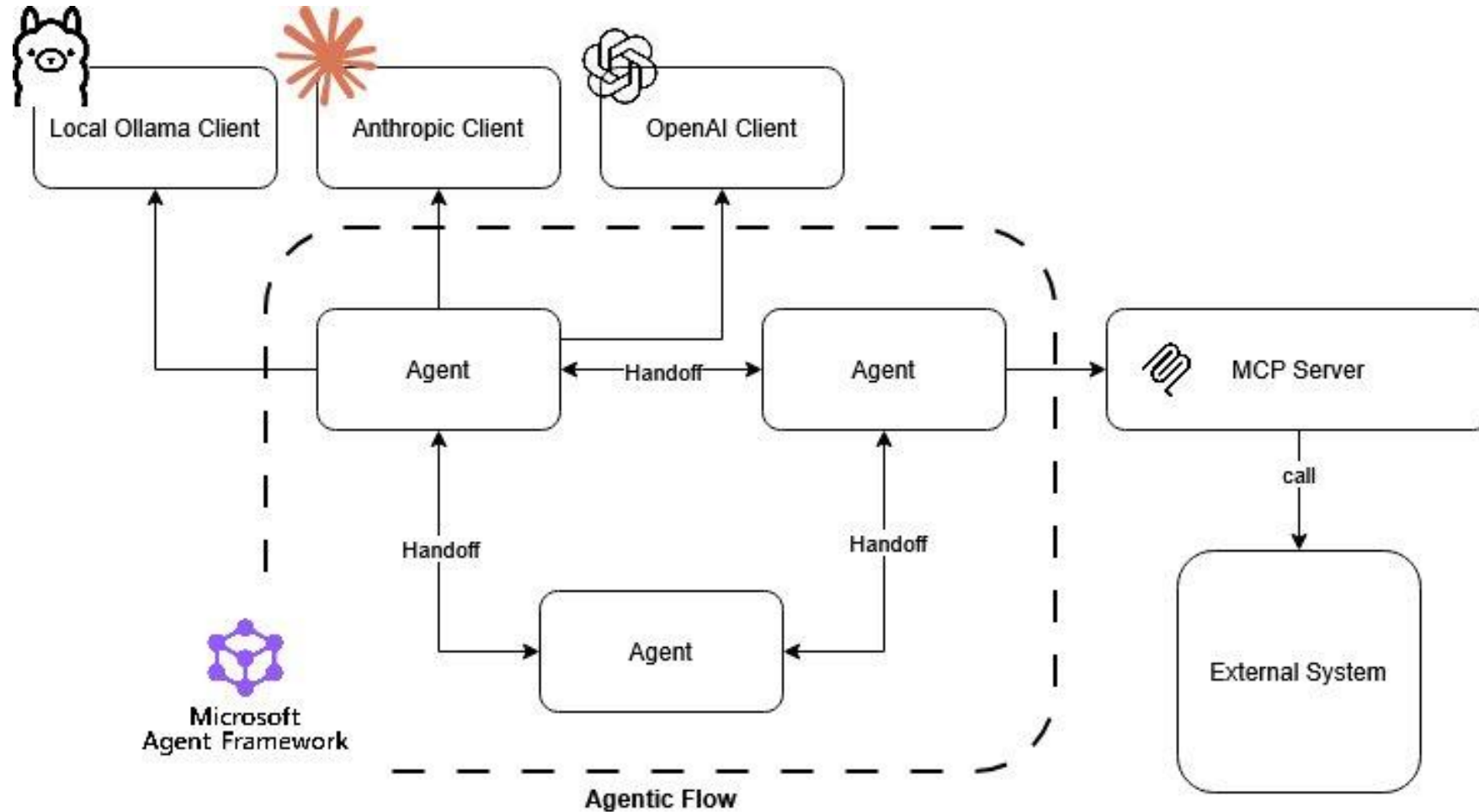


OpenAI

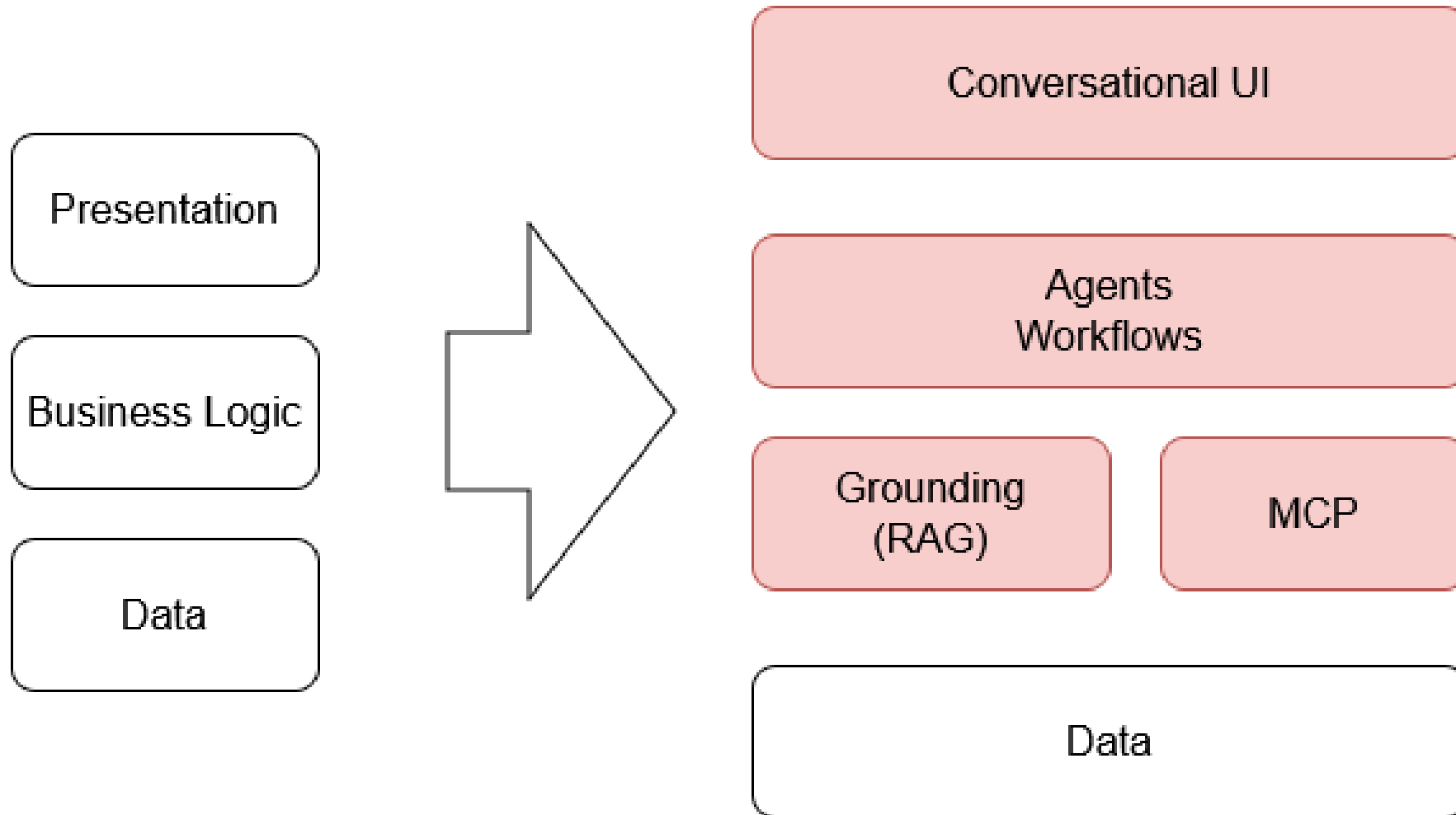


Face Recognition

Microsoft Agent Framework





Architecture Then vs Now



Azure PaaS Essentials for AI-Ready Architecture

Platform as a Service

-  Decrease Operations Engineering Load
-  Operations engineering concerns remains to address

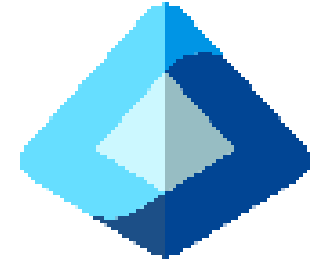
Azure PaaS Services



Azure Function



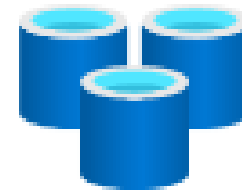
Web App



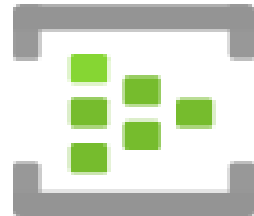
Entra ID



Cosmos DB



Redis Cache



Event Hub



Service Bus



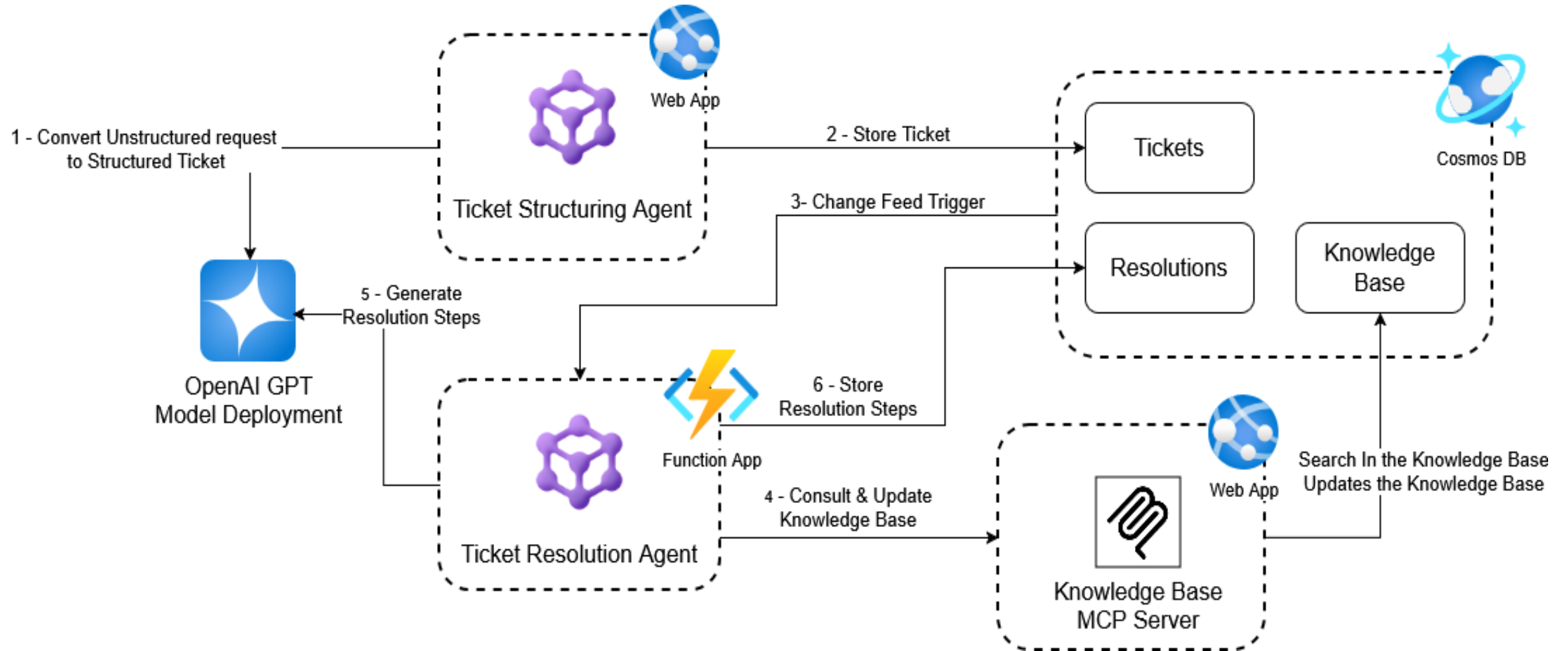
Azure DevOps

Why PaaS Services Integrate So Well?

- **Managed Identity**
- **VNET Integration**
- **Unified Monitoring & Observability**
- **SDK Consistency**

Practical Example: Intelligent Customer Support App

Demo Flow



Best Practices and Considerations

Right AI Model vs Fine-Tuning

- Better prompting over fine-tuning
- Fine tuning introduces overhead
 - Preparing training data
 - Training/Testing
- Fine tuning is useful for:
 - Getting a specific tone/terminology
 - Higher consistency
 - Restricting Model Behavior Tightly

PaaS Scalability Patterns for LLM Workloads

- Stateless Frontends and Backends
- Event Driven Architecture
- Async Processing

Content Filtering and Safety

- Prompt Filtering
- Output Filtering
- Abuse Monitoring

Key Takeaways

- **AI First**
- **Azure is Ready**
- **Azure helps you focus on business Value**



Questions ?