

Cloud Adoption Framework Al Scenario

What is the Azure Patterns & Practices team?

Azure Patterns & Practices is the team behind the:



Cloud Adoption Framework (CAF):

Framework for organizations to be successful in Azure.



Well-Architected Framework (WAF):

Foundational design guidance for solution architects.



Azure Architecture Center (AAC):

Implementation guidance to build solutions in Azure for different use cases.

Comprehensive guidance to help you be successful with Al

Agenda



What exactly are we talking about?

New scenario in Cloud Adoption Framework: "Al on Azure"



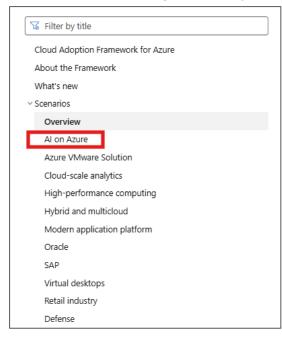
End-to-end roadmap for organizations adopting and maintaining Al

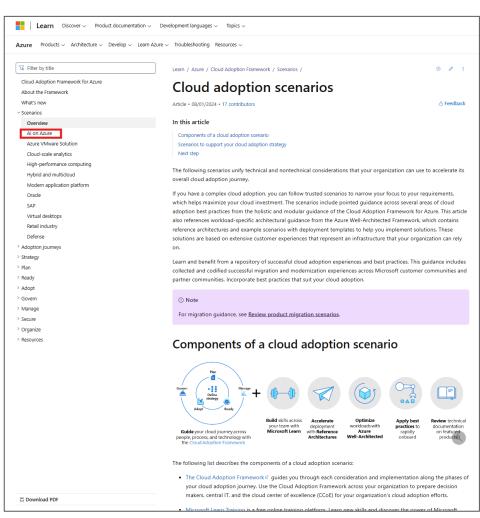


Covers technology, people, & processes for generative AI and nongenerative AI



Al hub to find the guidance you need when you need it.





Why the AI on Azure scenario?



ENTRY POINT TO AI

A proven path to adopt and use Al



PACE OF AI INNOVATION

A framework to organize the options available



AI RESPONSIBILITY

Control generative AI outputs

Who is this guidance for?

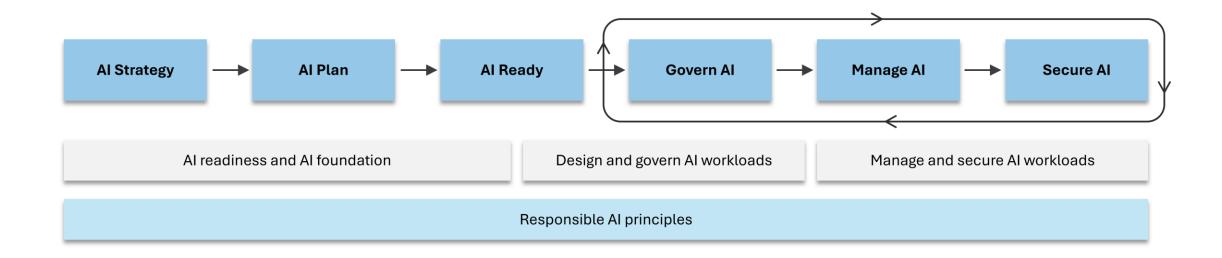
Types of businesses

- Enterprises: Roadmap for reliably scaling AI workloads.
- **Startups**: Guidance to securely and quickly deploy AI workloads.

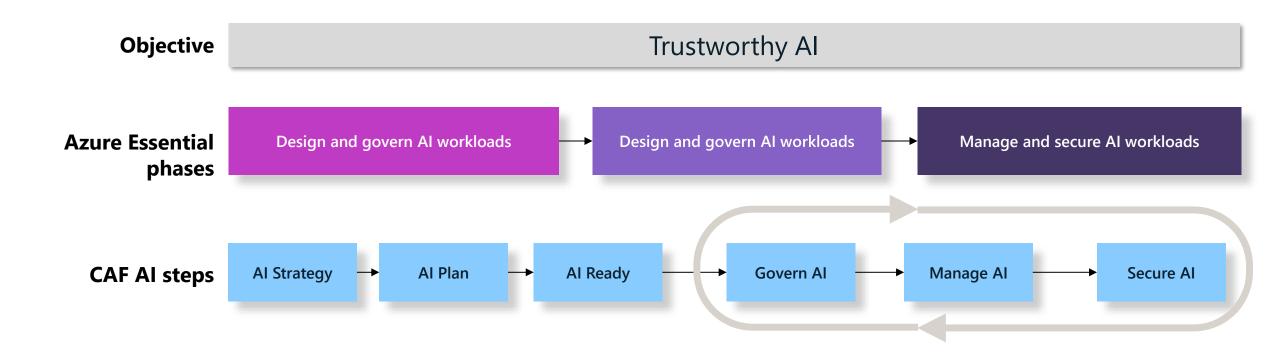
Roles

- **Executives:** Value perspective on Al adoption
- **Tech leads:** Decision criteria around skills, data, and cost
- Platform team: Govern AI workloads from a platform perspective
- Workload teams: Find AI architectures and guidance to build AI workloads.
- Governance teams: Control AI resources, deployment, models, & data.
- Security team: Maintain the confidentiality, integrity, and availability of AI workloads.
- Cloud center of excellence: Find processes to create an AI center of excellence.

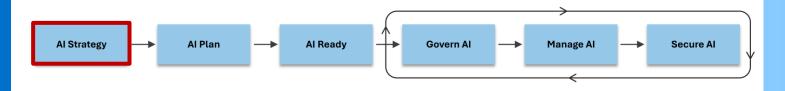
Al on Azure process



What is the goal?



Al Strategy



Who is it for? Executives, Technical decision makers What is it about? Defining your Al destination



Identify AI Use Cases: Find where AI provide value.



Define Al Technology Strategy: Choose based on skills, data needs, and cost.

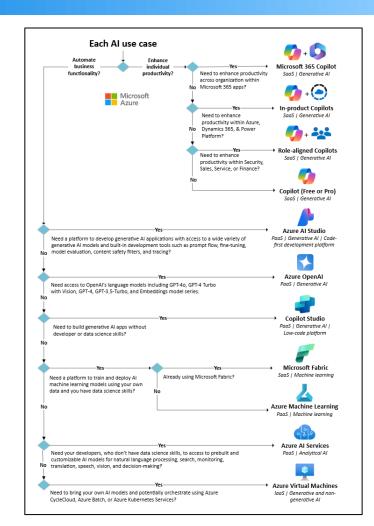


Define a Data Strategy: Plan for scaling, governing, and curating data.

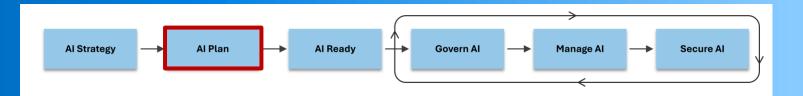


Define a Responsible AI Strategy: Commit to responsible AI principles.

Link to guidance: : AI Strategy



Al Plan



Who is it for? Technical decision makers, platform team, workload team What is it about? How to deliver your Al strategy

1

Assess Al Skills: Evaluate current Al capabilities and identify skill gaps. 2

Acquire AI Skills: Learn, hire, or partner. 3

Access Al Resources: Ensure access to Al platforms and services. 4

Prioritize Al Use Cases: Focus on high-impact Al that align with Al maturity

5

Create Al Proof of Concept: Validate Al use cases with a PoC and learn.

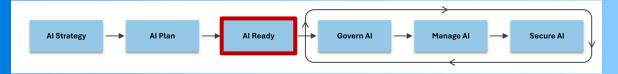
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Implement Responsible AI: Plan to build trustworthy AI.

Link to guidance: AI Plan

Al Ready: Prepare Al environment (Azure only)

Who is it for? Technical decision makers, platform team What is it about? Building an Al environment





Establish Al Reliability: Ensure redundancy and high availability.



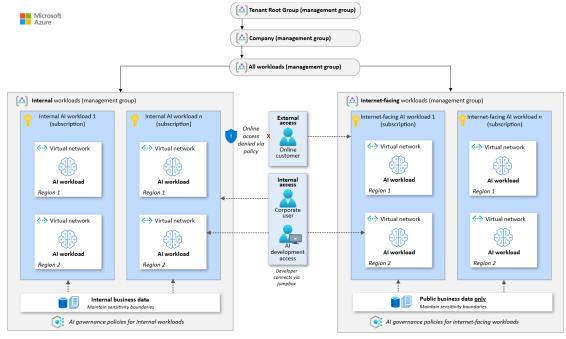
Establish Al Governance: Separate internet-facing and internal Al workloads.



Establish Al Networking: Secure networking foundation.

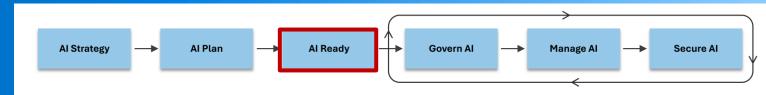


Establish an Al Foundation: Use Azure Landing Zone or Build an Al Environment.



Link to guidance: Al Ready: Prepare Al environment

Al Ready



Who is it for? Technical decision makers, workload teams, AI center of excellence What is it about? Finding design and architecture guidance

Al on Azure platforms (PaaS)



- **Al Architectures**: Use Azure Architecture Center and Well-Architected Framework find Al architectures, guides, and recommendations.
- Al Design Areas: Framework for Al adoption with PaaS (Azure Al Studio, Azure Al services, Azure OpenAl, Azure Machine Learning). Develop technology-specific standards.

Al on Azure infrastructure (laaS)

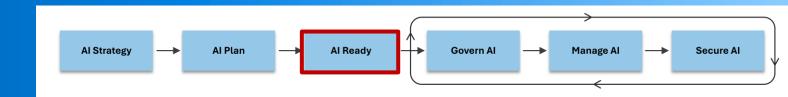


- Implementation option: CycleCloud Workspace for Slurm
- Al Design Areas: Framework for adopting Al with laaS. Develop technology-specific standards.

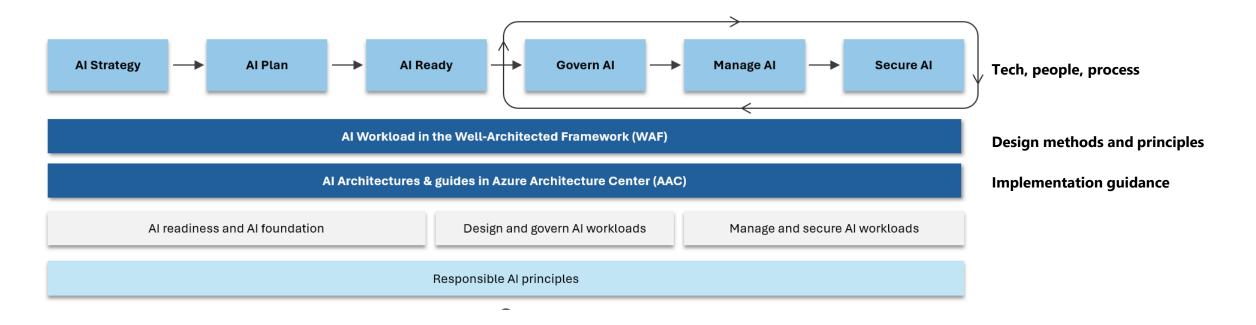
Azure SOL Databa Index or vector database Top results from inde. Jser sends query/prompt User query & top result from search and retrieval Generative AI endpoint Al generated responsi

Link: AI Ready: AI Design

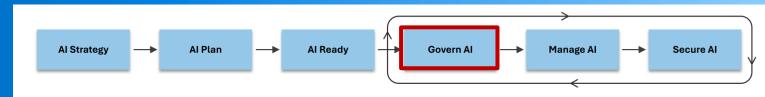
Al Ready



Comprehensive Al guidance



Govern Al



Who is it for? Governance team, workload team, platform team, technical decision makers What is it about? Process to mitigate Al organizational risk



Assess AI Organizational Risks: Understand AI workloads and apply *responsible AI principles* to identify and mitigate risks related to privacy, security, and bias.



Document Al Governance Policies: Define policies for Al model selection, data use, model maintenance, regulatory compliance, user conduct, and Al integration.



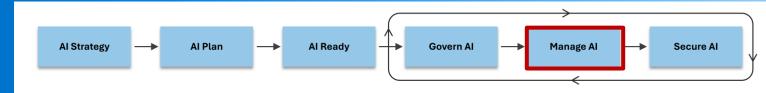
Enforce Al Governance Policies: Automate policy enforcement using tools like Azure Policy, conduct employee training, and governance guidance.



Monitor AI Organizational Risks: Establish ongoing risk evaluation procedures, measure AI performance, and conduct independent reviews to address emerging risks.

Link to guidance: Govern Al

Manage Al



Who is it for? Technical decision makers, workload team, platform team What is it about? Process to maintain healthy Al workloads



Manage Al Operations: Adopt MLOps or GenAlOps frameworks, standardize tools, and set up CI/CD pipelines.



Manage Al Deployment: Decide between workload-team or shared management.



Manage Al Endpoint Sharing: Decide if sharing Al endpoints within workloads is acceptable.



Manage Al Models: Establish model governance, monitoring, and retirement.



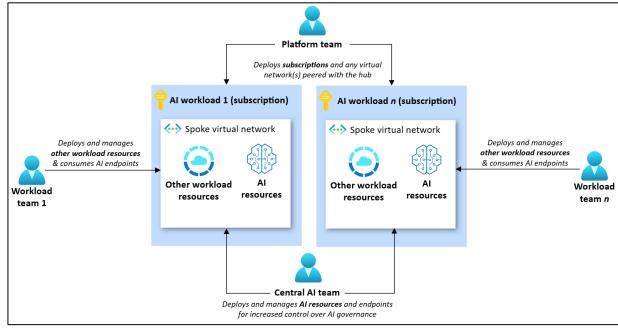
Manage Al Costs: Establish a process to follow cost-optimization best practices.



Manage Al Business Continuity: Use multi-region deployments and regularly test disaster recovery plans.

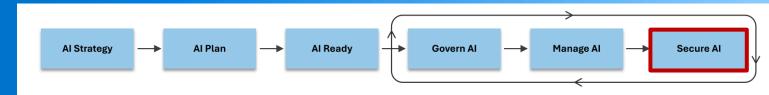


Manage Al Data: Curate golden datasets, securing pipelines, and adapting to sensitivity changes.



Link to guidance: Manage Al

Secure Al



Who is it for? Technical decision makers, workload team, platform team, security team What is it about? Process to protect Al workloads



Assess Al Security Risks: Identify and evaluate vulnerabilities using frameworks like MITRE ATLAS and OWASP to proactively address threats.



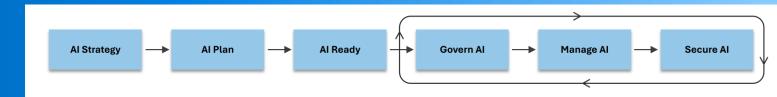
Implement AI Security Controls: Establish a unified approach to securing AI resources and data by maintaining visibility over AI assets, enforcing robust security practices, and protecting sensitive information through comprehensive data management and access controls.



Maintain Al Security Controls: Regularly monitor, test, and update security measures, conduct risk assessments, and provide ongoing employee training to ensure Al system security.

Link to guidance: Secure Al

QUICK DEMO



"Al on Azure"

- Microsoft Cloud Adoption Framework for Azure
- Cloud adoption scenarios

Questions?

