

AI LITERACY –
TIER 4

INTEGRATION



TIERS – THE CAR METAPHOR

Tier 1 – Awareness – Basics

“I can comfortably get into the seat of the car because I understand what it is.”

Tier 2 – Comprehension – Introduction into main AI concepts

“I can name and tell you what all the parts of the car are that I would use on a daily basis.”

Tier 3 – Application – How to effectively use AI on an everyday basis

“I can drive the car in normal situations.”

Tier 4 – Integration – How to effectively use AI in existing workflows; AI and data risk management basics

“I want to learn how to use a car to make my life easier, make my job easier, and understand the rules around using the car safely.”

Tier 5 – Fluency – AI Ethical Frameworks and Governance; Basics of Neural Networks, LLMs, and Machine Learning

“I can name different parts of the car that make it go; I can understand the regulations behind the rules enacted to make it safe for everyone to drive together.”

Two thin, dark grey lines intersect on the left side of the slide. One line is horizontal, and the other is diagonal, crossing it from the top-left towards the bottom-right.

AI LITERACY

- THE AI LIFECYCLE
- HUMAN-IN-THE-LOOP
WORKFLOWS
- DESIGNING WORKFLOWS
WITH AI
- OUTPUT CHECKS
- QUALITY VALIDATION
- GOVERNANCE OF
OUTPUTS

THE AI LIFECYCLE



THE AI LIFECYCLE

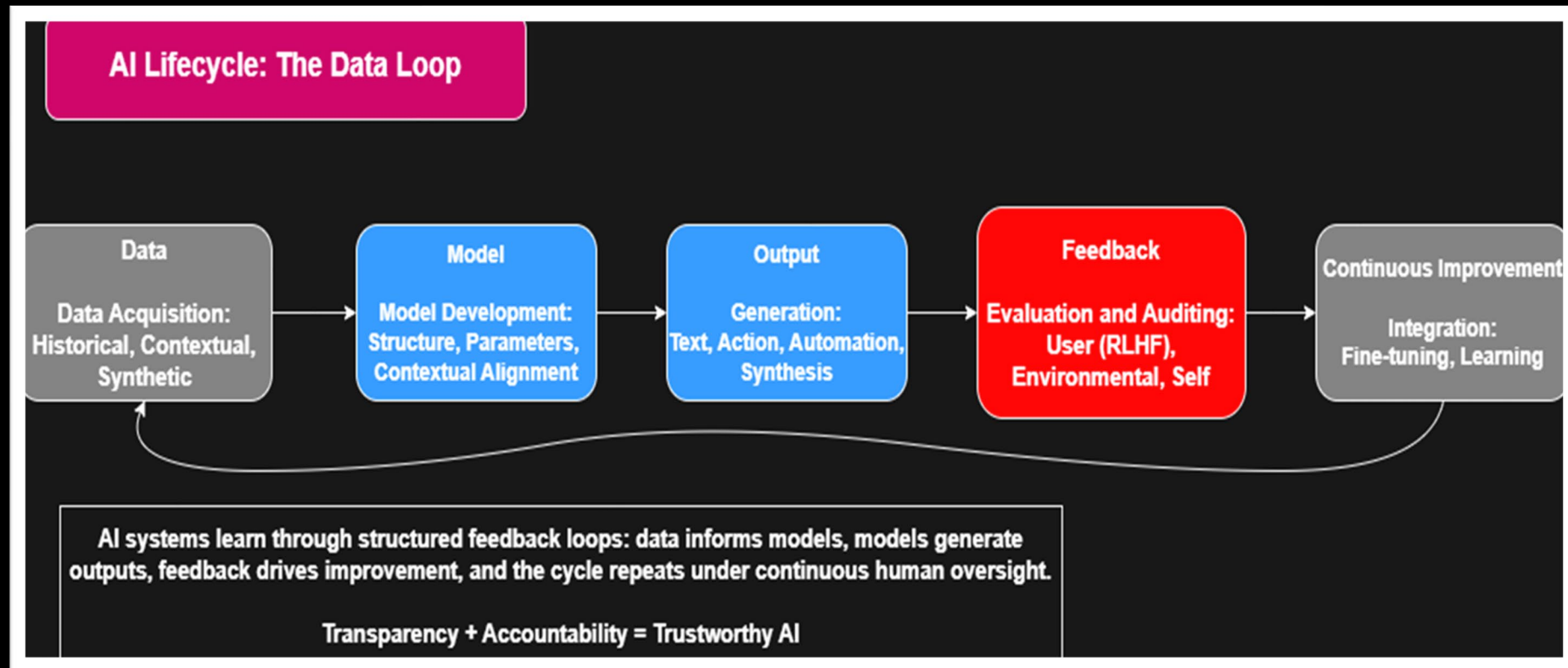
- DATA
 - Input: sensors, user input, public datasets, internal databases
 - Tasks: acquire, clean, label, confirm
- MODEL DEVELOPMENT
 - Define the goal
 - Design model architecture
 - Trained in specific data for pattern-matching or relationships
 - Models stress-tested before release to a broad consumer basis



THE AI LIFECYCLE CONTINUED

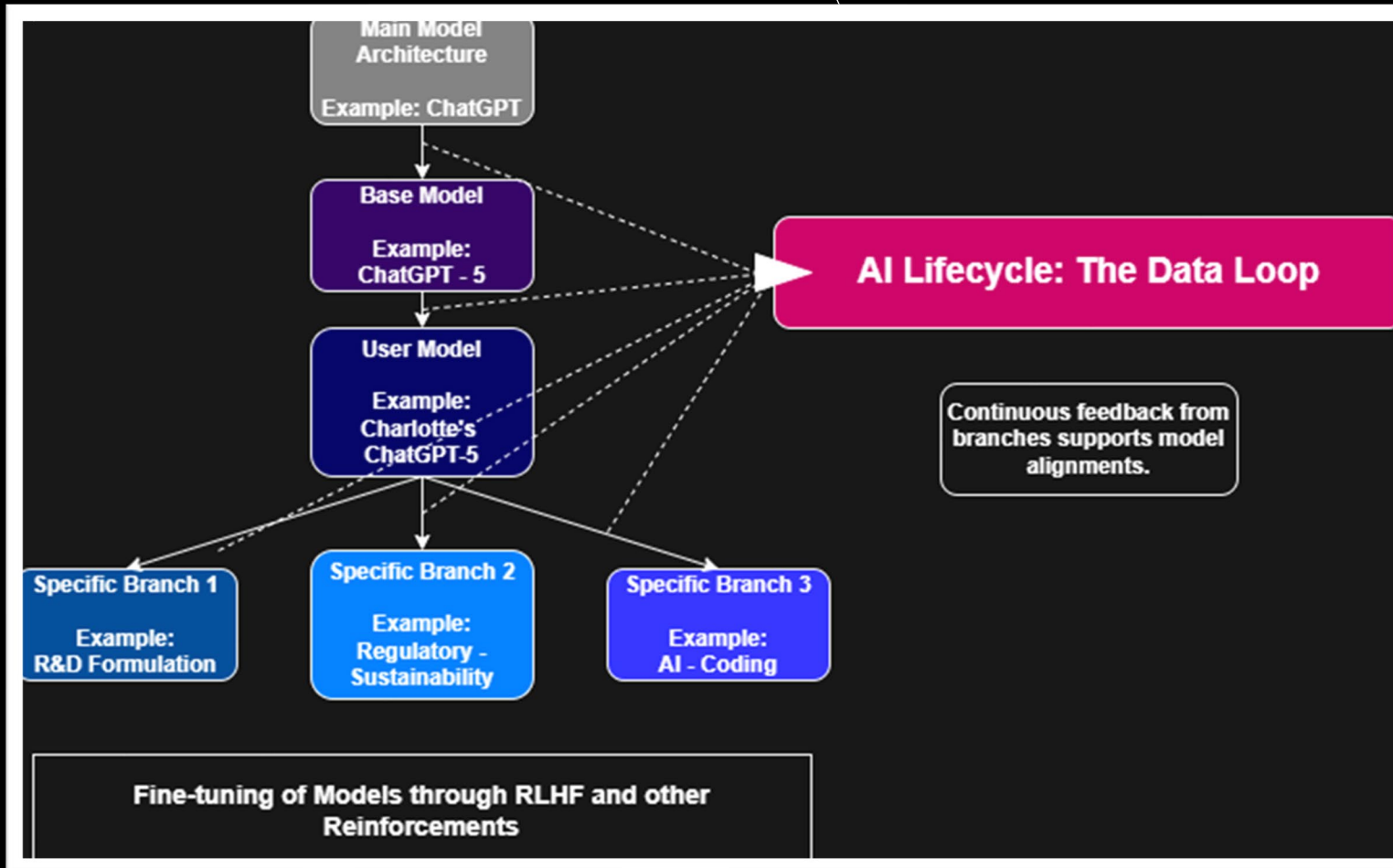
- **OUTPUT GENERATION**
 - Model Produces output
 - Outputs move into visual renders
- **FEEDBACK**
 - Users, auditors, or automated monitors evaluate performance
 - Detection of errors, drift, unexpected behaviors
 - Log results
- **IMPROVEMENT/RETRAINING**
 - Feedback incorporated into new data or updated parameters
 - Re-training and fine-tuning of the model
- **RETIREMENT**
 - End of the lifecycle - taking the model offline

AI LIFECYCLE - GRAPHIC 1



Data is fuel that tells the engine (the model) what to do. The output is how well the engine performs with that fuel. Feedback refines the engine to be better, but feedback means nothing without using the information to build a better engine.

AI LIFECYCLE – GRAPHIC 2



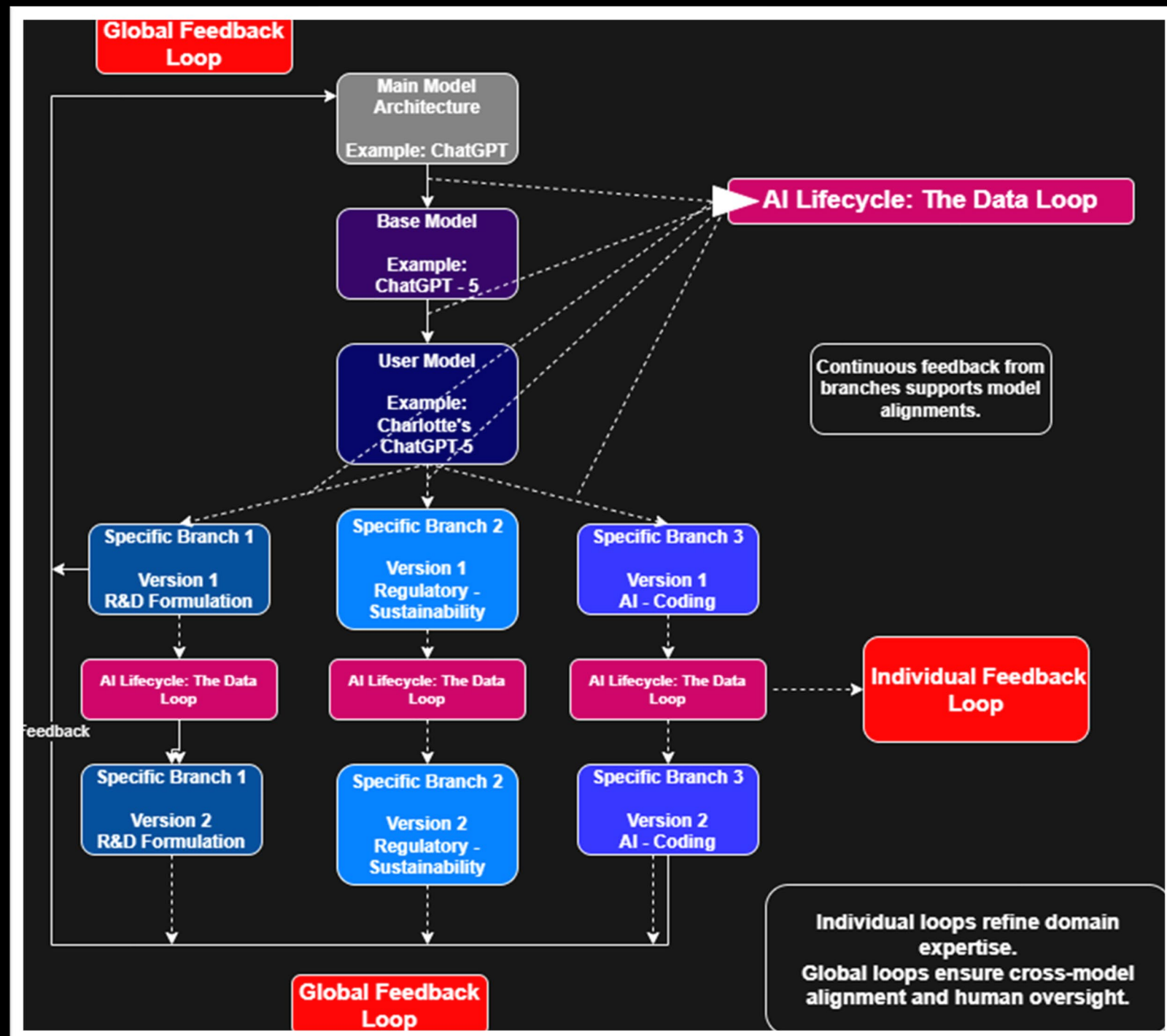
Fine-tuning of model behaviors through feedback is a continuous on-going activity that supports model alignments.

HUMAN-IN-THE-LOOP WORKFLOWS

- Most widely known of the Human-AI Collaboration models
- Also called HITL
- Collaboration - between humans who understand how the system works and systems tuned for human feedback - results in better outcomes
- Humans act as the final manager of all AI outputs before publication
- Explicit feedback of the outputs get incorporated into the model and is used to fine-tune consecutive outputs
- Sometimes called “refinement” or “fine-tuning”; individual user fine-tuning is sometimes called “user-optimization”

HITL is NOT a formality signature; this is a defined accountability checkpoint with approval/rejection criteria.

AI LIFECYCLE – GRAPHIC 3



Note: Not all AI systems are LLMs; the lifecycle concept applies broadly, but specific risks and controls vary by system type.

“DON’T BE THAT GUY.”

- Remember: every input and piece of feedback reinforces model behavior on an individual basis
- When strong enough, behaviors can leak into global feedback loops, ESPECIALLY when:
 - The system detects they drive user engagement and
 - The model has been tuned for user satisfaction
- This effect sometimes amplifies during periods when safety and moderation layers are reduced, such as new model rollouts.
- Prompts and feedback shape future outputs – treat this responsibly.



Grok’s weighting leans heavily into user engagement and satisfaction, causing the algorithms to gravitate to whatever the AI believes will make the user happy, instead of what is “good” or truthful.

DESIGNING WORKFLOWS WITH AI

- Choose a definitive goal.
- Assess infrastructure, capability, and data of the current system
- Where to add AI value
- Where human oversight is essential
- Adapting the CCP method from food manufacturing for AI

Critical Control Points Theory

Critical Control Points in Food Manufacturing: Where are the steps in the process where something could go wrong and introduce a risk factor into food made for public consumption?

These are the points in the process where a human must be present to verify that nothing has gone wrong.

Because every business is different, it is up to each business to identify individual CCP.

SOME OUTPUT PROBLEMS...

1. Hallucinations
2. Presenting incorrect information overconfidently
3. Biases
4. Literalism
5. Incorrect Outputs due to missing context
6. Incorrect Outputs due to platform instability
7. Not Verifying Sources
8. Statistical Collapse (Mode Collapse)

...AND SOME SOLUTIONS

- Double Check Sources
- Use Multiple Models for Cross-Verification
- Ask for “Adversarial Testing”
 - The model will stress-test outputs/ideas
- Model Collapse > Variability and Verbalized Sampling
- Remember: the more specific you are, the better your outputs
- Notes on failures due to platform instability: unless you are building your own model, there’s nothing you can do; you can only notice them and point it out to the model 😞

If the task is high-stakes with immediate real-world consequences, don’t use AI for final outputs: use it for brainstorming and drafting.



AI GOVERNANCE REVIEW

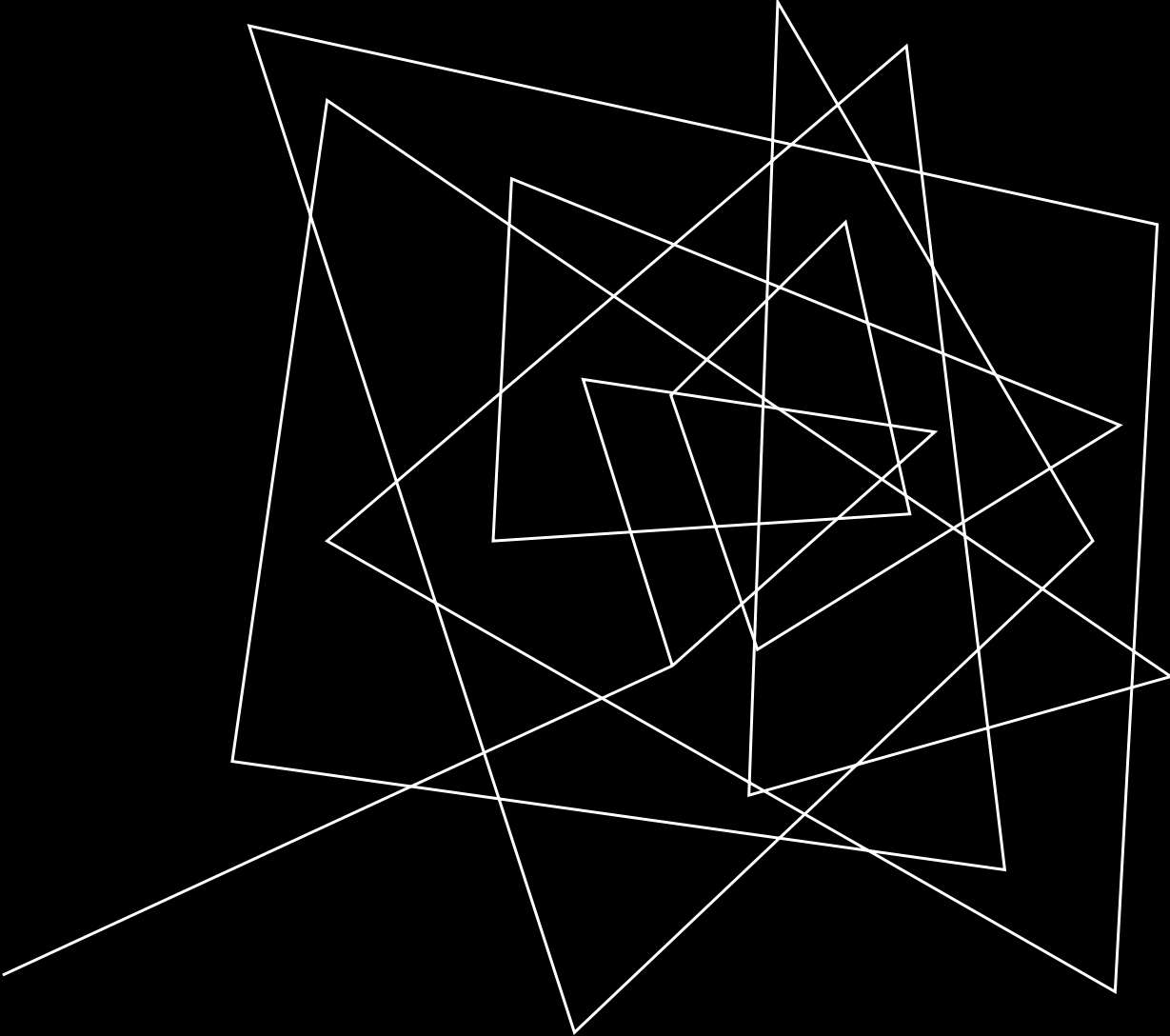
- Definitions

Governance: the rules and processes meant to keep things trustworthy, safe, and well-managed

AI Governance: the rules and processes meant to make sure AI is used responsibly – that it is accurate, fair, explainable, and aligned with laws and company values

Data Governance: the rules and processes meant to keep data organized, secure, and high-quality

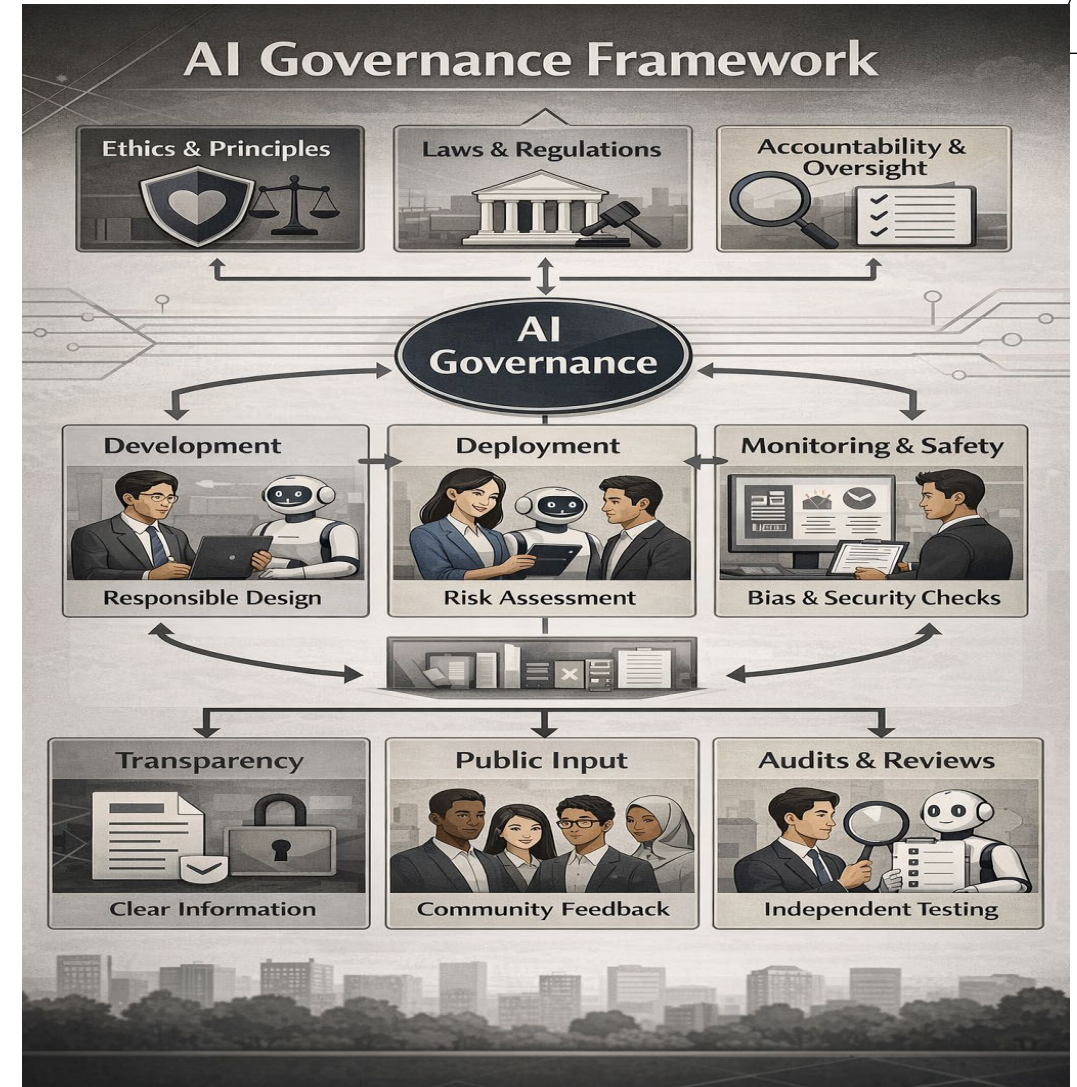
- AI Policies: the rules around using AI for your particular company
- Accountability
- Auditability
- Transparency
- Fairness and Bias
- Continuous Monitoring
- Documentation



DIFFERENT GOVERNANCE FRAMEWORKS

WHAT IS AN AI GOVERNANCE FRAMEWORK?

- AI Governance Framework: The rules, roles, and controls that ensure AI systems do what they are intended to do, and, more importantly, stopped or corrected when doing the things they are not supposed to.
- Currently, many AI governance frameworks are based on the founding concepts in the OECD Principles or EU AI Act.



FRAMEWORKS

HARD LAWS, SOFT LAWS, AND STANDARDS

The current state of AI Governance and how governments and organizations think about responsible AI use.

Framework	Regulatory Body	Geographic Regulatory Area	Oversees	Focus
EU AI Act	European Union	European Union (27 Members)	Sets rules for how AI can be built and used based on risk level	Safety, transparency, protection of citizens
NIST AI RMF	National Institute of Standards and Technology (NIST)	United States (Voluntary; has global influence)	Provides guidance for AI use	AI risks across the AI lifecycle
ISO/IEC 42001	International Organization for Standardization (ISO) & International Electrotechnical Commission (IEC)	International	Provides guidance for AI use	How organizations set up management systems for AI governance
OECD AI Principles	Organisation for Economic Cooperation and Development (OECD)	International	Provides guidance for AI use	Trustworthy, human-centered AI
TRAIGA	State of Texas	Texas, USA	Framework for responsible AI use in government and business	Emphasizes trust, accountability, and public trust

Notes: Some businesses have very specific legal obligations for AI use, such as in the financial, civic, and healthcare fields. For more information on general AI Governance frameworks, visit <https://aiqgate.com/current-ai-governance-frameworks/>

KEY TAKEAWAYS

- AI systems are not static; they change.
- Human-AI collaborative models need to account for both the human aspects and the AI system characteristics to operate well.
- Knowing how failures can happen and how to spot them enables users to reduce the likelihood of them happening in the future.
- Governance Frameworks give guidance on using AI systems in a way that benefits humanity.

The best way to prevent future problems from happening is to learn how to spot them, finding out why they happened, and then using that knowledge to build a better system and process going forward.



Q & A

THANK YOU

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Revision Date	Revision Summary
01.27.2026	Created PPT/PDF for generalized Tier 4 use.

AI Disclosure Statement:

This document was generated through human-AI collaboration with the use of ChatGPT/Claude/Grok. All content has been reviewed for alignment with NIST RMF and ISO 42001 standards in compliance with current AI data governance as of 01/19/2026.