

Artificial Intelligence

Transforming Health Professions Education

“Capabilities, Risks, and Responsible Use”



Daniel Salcedo, MD, MHPE

Executive Director

Belmont University Center for Interprofessional Engagement and Simulation

What we will explore together

- How AI is currently being used in health professions education
- What AI can and cannot realistically support in learning contexts
- Common questions, concerns, and boundaries educators raise
- A simple way to think about responsible AI exploration in education

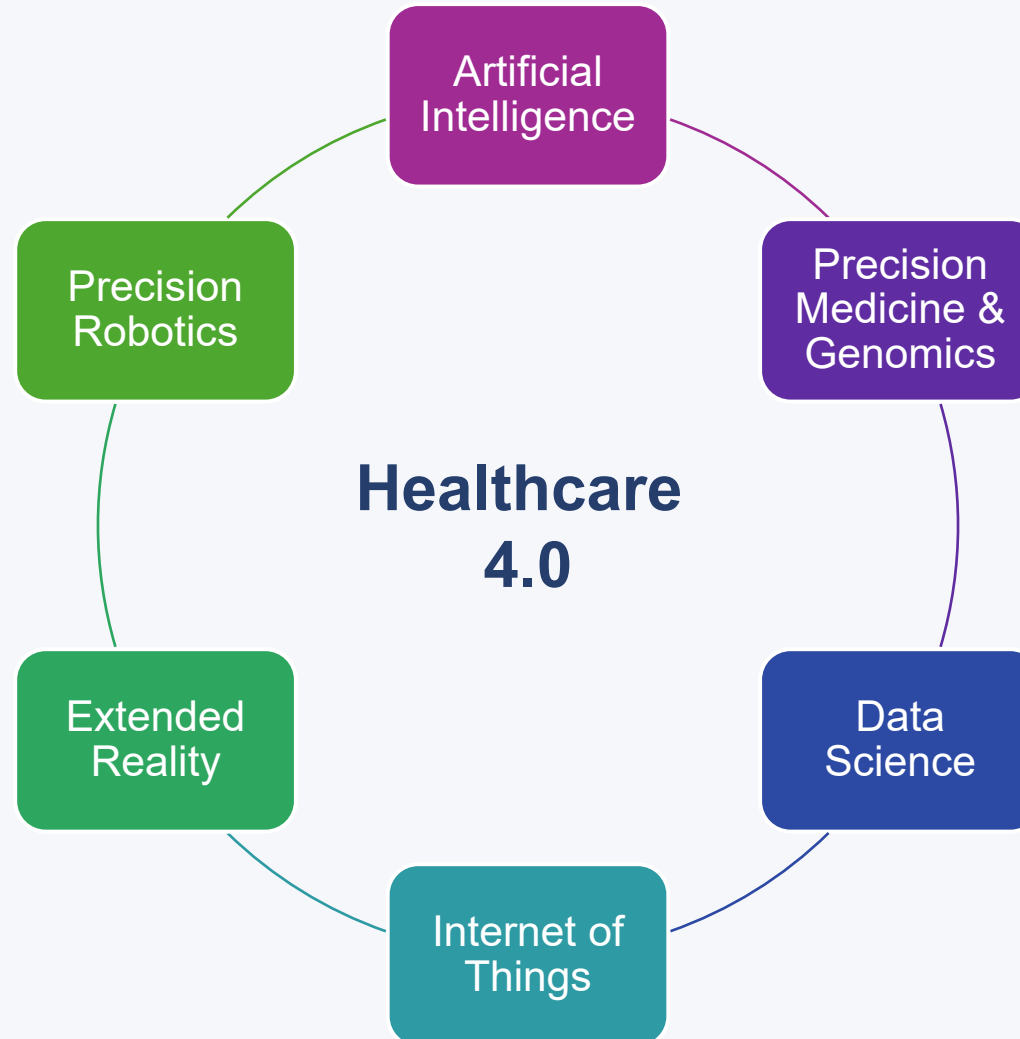
Let's explore AI

Think – Pair - Share

- What felt helpful about that interaction?
- What felt uncomfortable or raised concern?
- Where could this support learning?
- Where would you want clear boundaries?

Why This Moment Matters

AI as part of a broader transformation in healthcare



What Do Health Professionals Need to Know About AI?

- AI systems are designed to perform specific tasks, not general human reasoning
- AI outputs are probabilistic and context-dependent, not authoritative
- AI performance depends on data quality, design choices, and oversight
- AI **does not replace professional judgment** — it reshapes how judgment is applied

Core AI Capabilities in Health Professions Education

Pattern recognition & classification	Identifying trends in learner performance, behaviors, or errors across datasets
Natural language interaction	Supporting conversational learning, feedback, reflection, and simulated dialogue
Content generation & transformation	Drafting cases, questions, feedback, or adapting content to learner level
Adaptive support & personalization	Adjusting prompts, difficulty, or feedback based on learner input and context
Data synthesis & augmentation	Combining multiple information sources to support insight — not decisions

Common Risks & Limitations of AI in Health Professions Education

- **Overconfidence and automation bias**
Learners or educators may over-trust AI outputs without sufficient critical appraisal
- **Bias and representational gaps**
AI systems reflect their training data, including omissions and inequities
- **Hallucinations and confident errors**
AI may generate plausible but incorrect or unsupported information
- **Context collapse**
Educational nuance, situational factors, and learner intent may be flattened or misunderstood
- **Misalignment with educational goals**
AI use may drift toward convenience rather than learning outcomes without intentional design

The Current Moment in AI and Education

- Rapid experimentation with AI across learning environments
- Inconsistent alignment across tools, curriculum, pedagogy, and assessment
- Growing need for shared language, evidence, and design principles to guide AI use

Small Group Discussion

1. What excites you about the potential of AI to support teaching and learning?
2. As an educator, what concerns or worries does AI raise for you?



The SCOPE Framework for Responsible AI Integration



Simple Map of AI Capabilities in Education

Generative AI

Creates new content such as text, images, or scenarios

Predictive AI

Estimates future trends based on past data



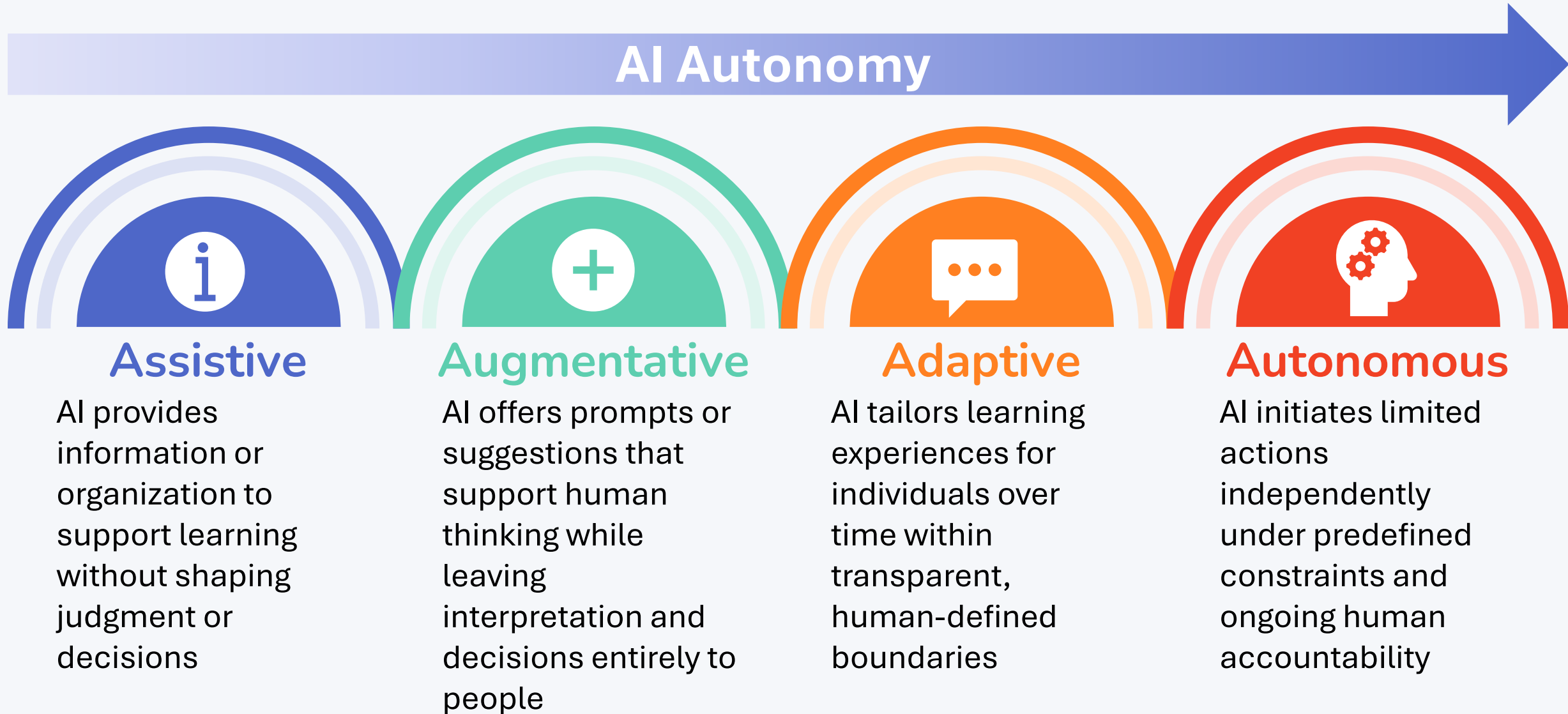
Perceptive AI

Observes and identifies patterns in performance or learning data

Agentic AI

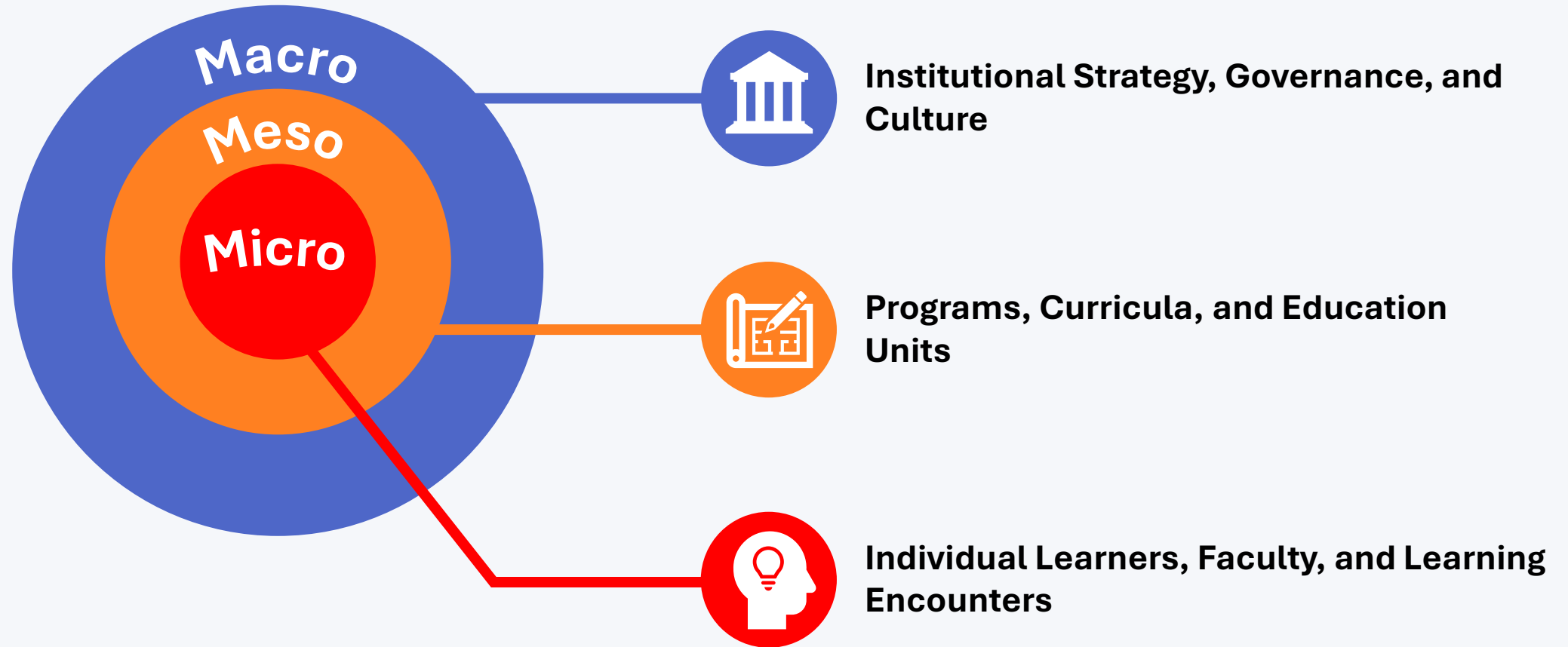
Acts autonomously to initiate tasks or decisions

Partnering with AI: Levels of Responsibility

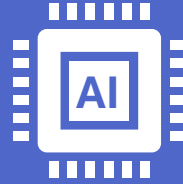


Human Always in the Loop

Aligning AI Decisions Across the Educational System



Designing AI We Can Trust



AI Trust Architecture

Transparency

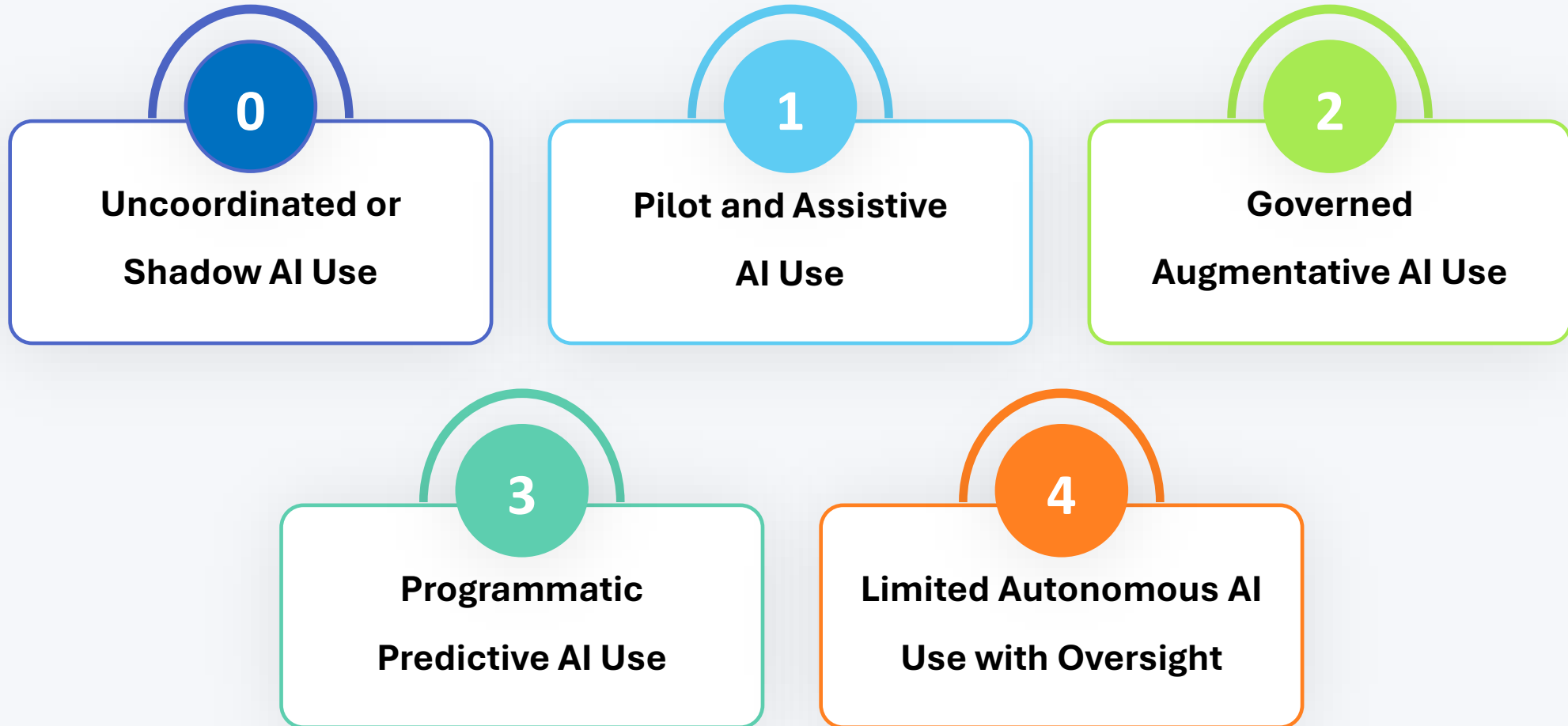
Consent and Control

Calibration and Interpretability

Preservation of Empathy and Identity

Data Stewardship and Governance

SCOPE Institutional Maturity Levels



From Curiosity to Capability

“Exploration doesn’t mean adoption. It means learning enough to make informed decisions.”

- Trying AI without committing to adoption
- Experimenting in low-stakes environments
- Sharing successes and failures openly
- Maintaining human judgment and accountability
- Aligning exploration with institutional readiness and long-term support

Let's Think Together

Questions, reflections, and ideas are welcome

“Individually, we are one drop. Together, we are an ocean.”

— *Ryunosuke Satoro, Japanese writer*