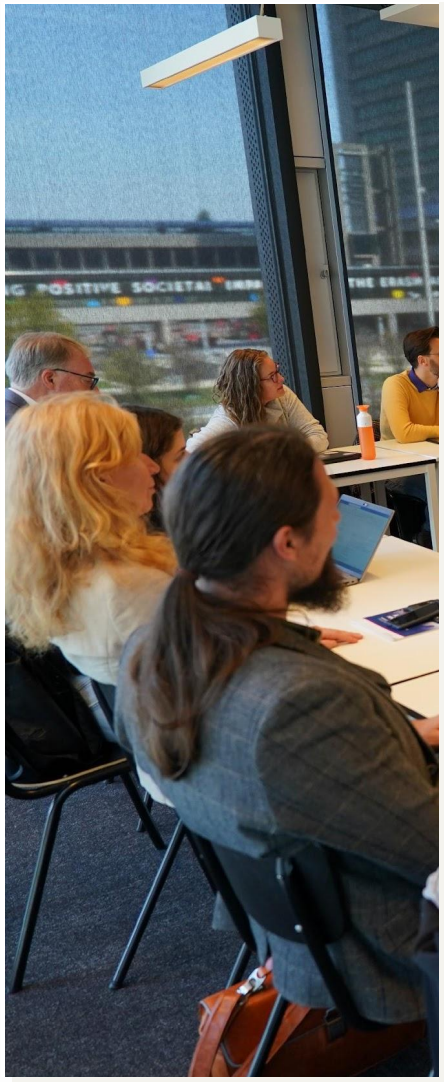
PvKO AI Ethics Maturity

18-09-2025

EDSA start

Motivation

What does the operationalization of AI ethics in organizations entail?



Status

In recent years, many good frameworks and tests have been developed at the technical and policy level. Implementation of these frameworks in organizational practice remains a challenge.

'Principles' to 'Practice' Gap

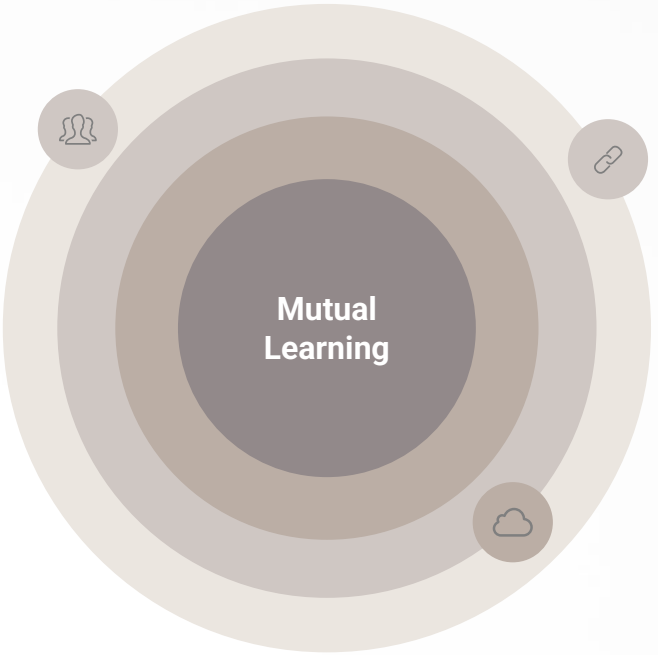
Many organizations are currently working on closing close the 'theory-practice' or 'frameworks - implementation' gap.

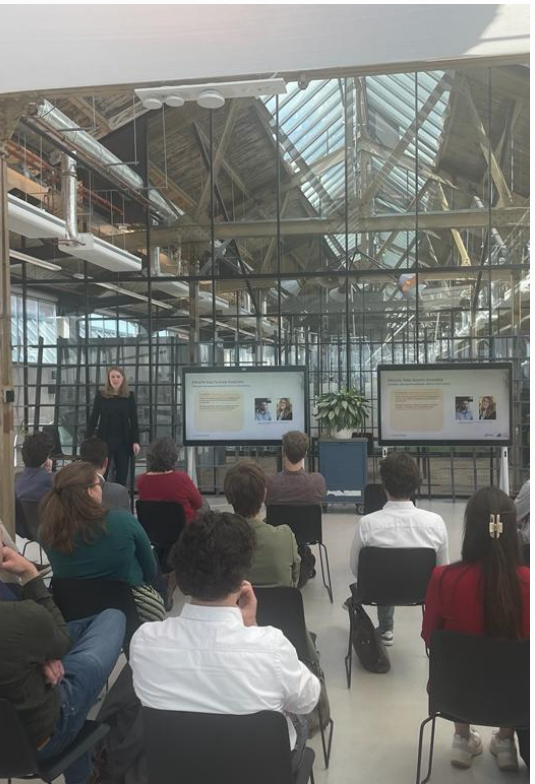
Research

Research into the effective implementation in organizational context: Tamara RSM PhD AI & Ethics, Joris Esphil PhD, and Ethics & AI Officer Volksbank.

EDSA Methodology

Mutual Learning





Diversity

Bring together various groups of stakeholders (researchers, users, intermediaries, policy makers) from different sectors to learn about AI ethics challenges and solutions.

Interactive Learning

Facilitate an interactive learning process through mutual exposure of views and experiences, expectations and concerns.

Small-scale

Exploring themes and issues in small scale sessions so that everyone's expertise and experience can contribute.

Ethical
Data
Science
Association

EDSA

Partners

POLITIE

Ministerie van Binnenlandse Zaken en Koninkrijksrelaties

ERASMUS UNIVERSITEIT ROTTERDAM

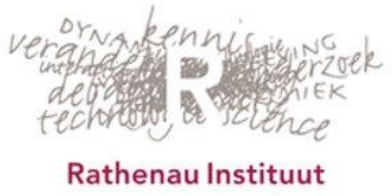
univé daar plukt ú de vruchten van

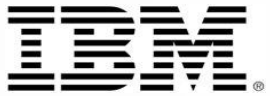
de volksbank

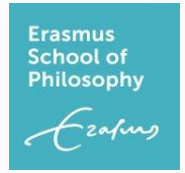
asn bank BLGwonen RegioBank SNS

SVB voor het leven Sociale Verzekeringsbank

Participants







AI Ethics Maturity Model

Opinion Paper | Open Access | Published: 24 October 2022

The AI ethics maturity model: a holistic approach to advancing ethical data science in organizations

J. Krijger, T. Thuis, M. de Ruiter, E. Ligthart & I. Broekman

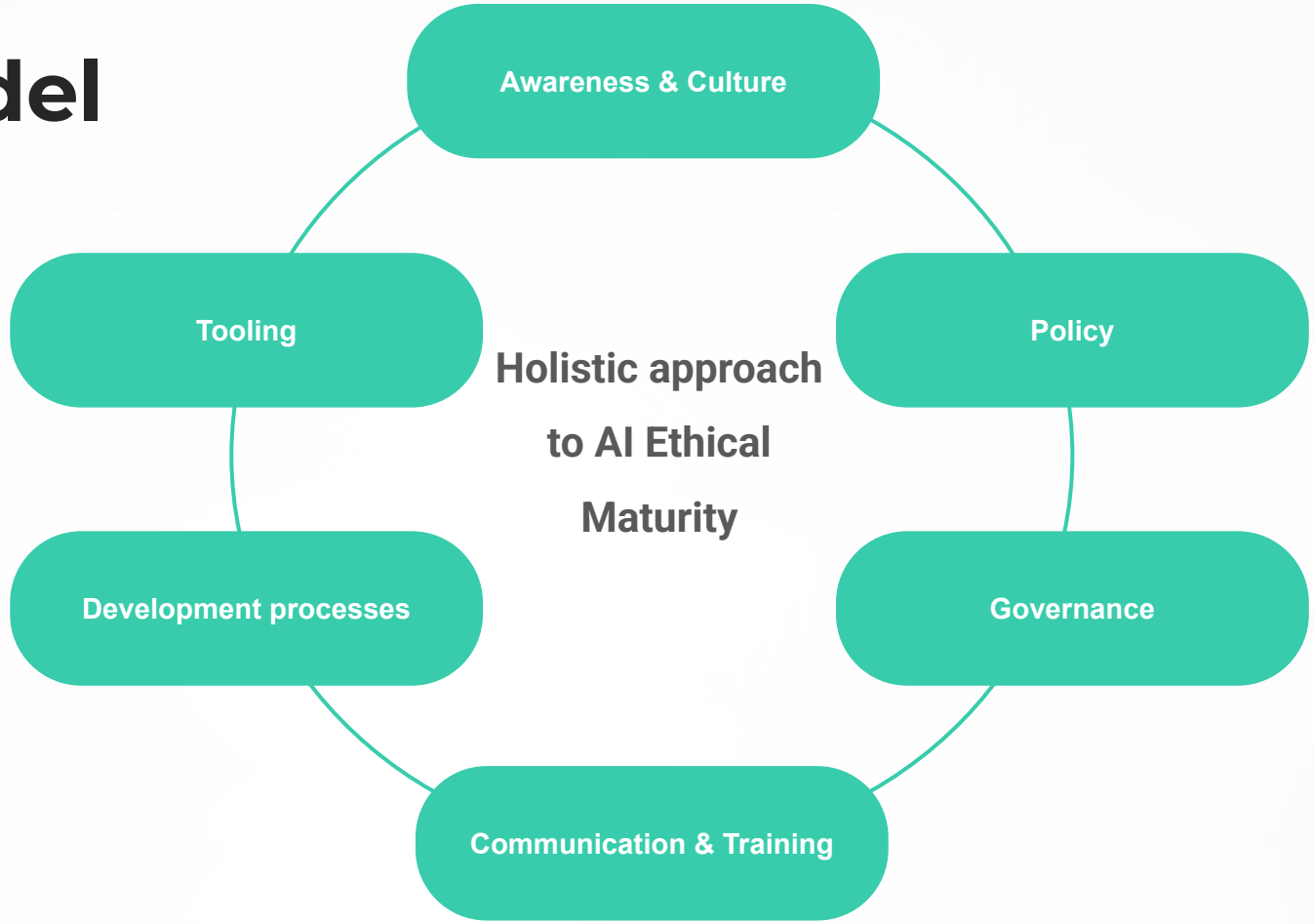
AI and Ethics (2022) | Cite this article

Abstract

The field of AI ethics has advanced considerably over the past years, providing guidelines, principles, and technical solutions for enhancing the ethical development, deployment and usage of AI. However, there is still a clear need for research that facilitates the move from the 'what' of AI ethics to the 'how' of governance and operationalization. Although promising literature on the challenge of implementation is increasingly more common, so far no systemic analysis has been published that brings the various themes of operationalization together in a way that helps the gradual advancement of AI ethics procedures within organizations. In this opinion paper we therefore set out to provide a holistic maturity framework in the form of an AI ethics maturity model comprising six crucial dimensions for the operationalization of AI

https://link.springer.com/article/10.1007/s43681-022-00228-7

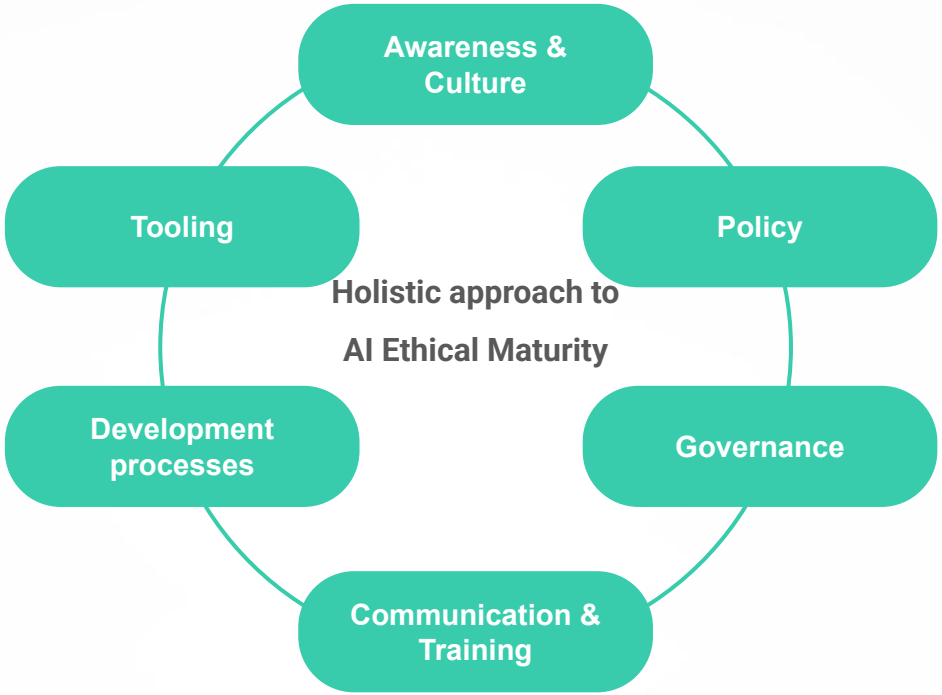
AI Ethics Maturity Model



Maturity Dimensions

- Organizational culture
- Organizational awareness
- Organizational sponsorship

- Fundamental tooling
- Technical tooling
- Procedural tooling



- Policy presence
- Policy ownership
- Policy evaluation

- Lifecycle integration
- Documentation & traceability
- Development environment

- Governance procedures
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- External communication

AI Ethical Maturity - Level Overview

Erasmus University Rotterdam

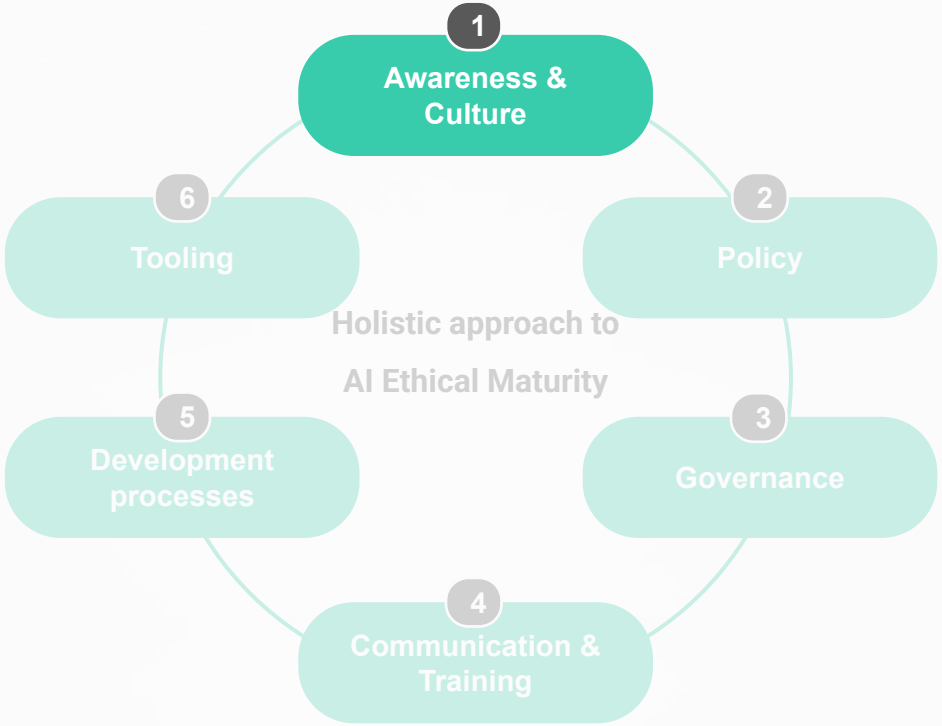
Dimension	Level 1 No initiatives	Level 2 Some initiatives	Level 3 Informal to formal initiatives	Level 4 Structural formal initiatives	Level 5 Fully integrated
Awareness & Culture	Awareness of data on an individual level out of personal interest	Fragmented attention throughout the organization	Focused and synthesised awareness through the formation of specific working groups or task forces	Organization wide support and representative multidisciplinary working groups	Buy-in from senior, middle and junior management, broad support and active involvement of developers, business and management
Policy	Minimal to no policy available for warranting ethics in data science	There is a demand for policy. Conversations have started and there is a first concept on the policy	Policy for ethical data science is available. A person assigned for the implementation and monitoring of the policy aspects	Policy is implemented in most parts of the organization. A central point is initiated for questions, monitoring, and feedback	Policy on data sceince ethics is widely implemented and monitored throughout the organization
Governance	Only legally mandatory checks	Additional robustness and model validation checks, not formally required	Specific ethical checks in the design phase or post hoc, not formally required	Formally required ethical checks throughout data science lifecycle, governance committees are appointed	Fully integrated and supported AI ethics governance structure with formally required checks, procedures, and operating governance committees
Communication & Training	Minimal to no communication; employees improve their understanding based on own initiatives	Initiative for training and communication only in small teams involved in data science processes	Incorporation of training and communication not only inside data science teams but also key stakeholders (e.g. C-suite) in line with established ethical framework	Company-wide sessions as well as the regular training of core team members. Communication about the ethical aspects is becoming a part of the daily tasks and activities	Communication happens outside of the company to customers and citizens. There is a fully developed training module that includes a schedule for regular traiing for different types of users in the ogrnaization
Development Processes	No structural approach to data science, or ethics in the lifecycle phases	Initiative for a structured data science approach mainly focusing on technical design choices in the development process	Relatively structured data science approach with ethical design choices were requested (on demand)	Structured approach, with alignment of ethical data science aspect to different phases in the data science lifecycle	Integration in the entire data science workflow where specific activities are implemented in and aligned with distinct lifecycle phases
Tooling	No or minimal tooling is used	There is demand for insights into the ethical aspects of data science. First ideas are gathered and translated into possible analysis/tooling	First methods and tools for generating insights into the ethical aspects are implemented and adopted	Tooling is available for and adopted by multiple stakeholders in the organisation to monitor, discuss, and improve ethical data science aspects	Wide adoption of tooling where both internal and external stakeholder are using the available tooling to proactively monitor, discuss, and improve ethical data science aspects

Growth path towards AI ethics maturity

Dimension	Current & Target Maturity	Steps To Take
Awareness & Culture	Current 2023 2026 2028 Level 1 2 3 4 5	Awareness & Culture • …. • …. • ….
Policy	Current 2023 2026 2028 Level 1 2 3 4 5	Policy • …. • …. • ….
Governance	Current 2023 2026 2028 Level 1 2 3 4 5	Communication & Training • …. • …. • ….
Communication & Training	Current 2023 2026 2028 Level 1 2 3 4 5	Development Processes • …. • …. • ….
Development Processes	Current 2023 2026 2028 Level 1 2 3 4 5	Governance • …. • …. • ….
Tooling	Current 2023 2026 2028 Level 1 2 3 4 5	Tooling • …. • …. • ….

Dimension 1: Awareness & Culture

- Organizational **culture**
- Organizational **awareness**
- Organizational **sponsorship**



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Dimension 2: Policy

- Organizational **culture**
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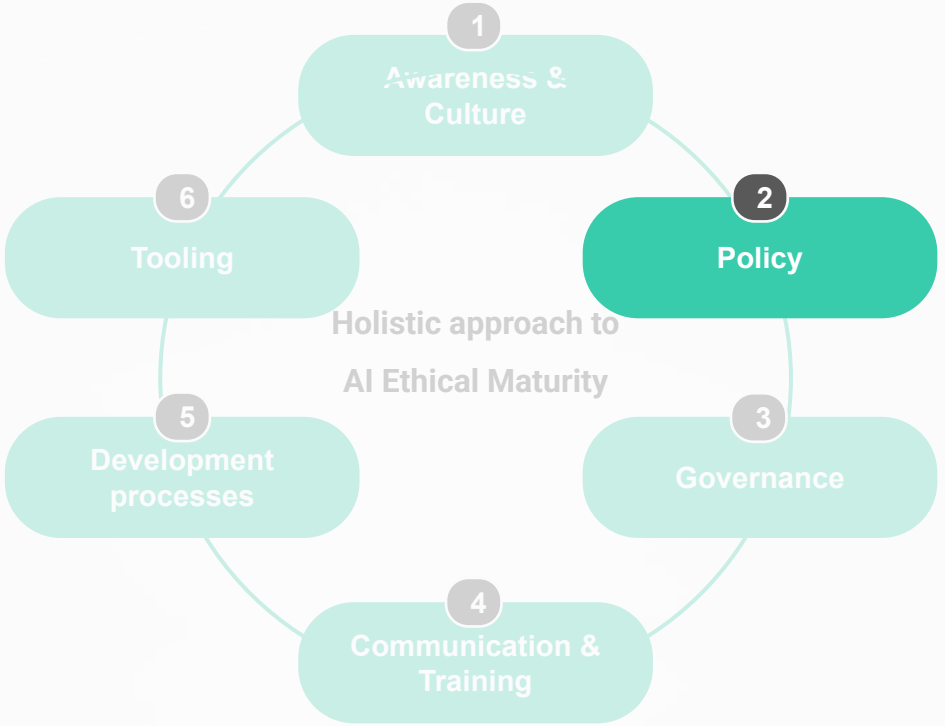

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Dimension 3: Governance

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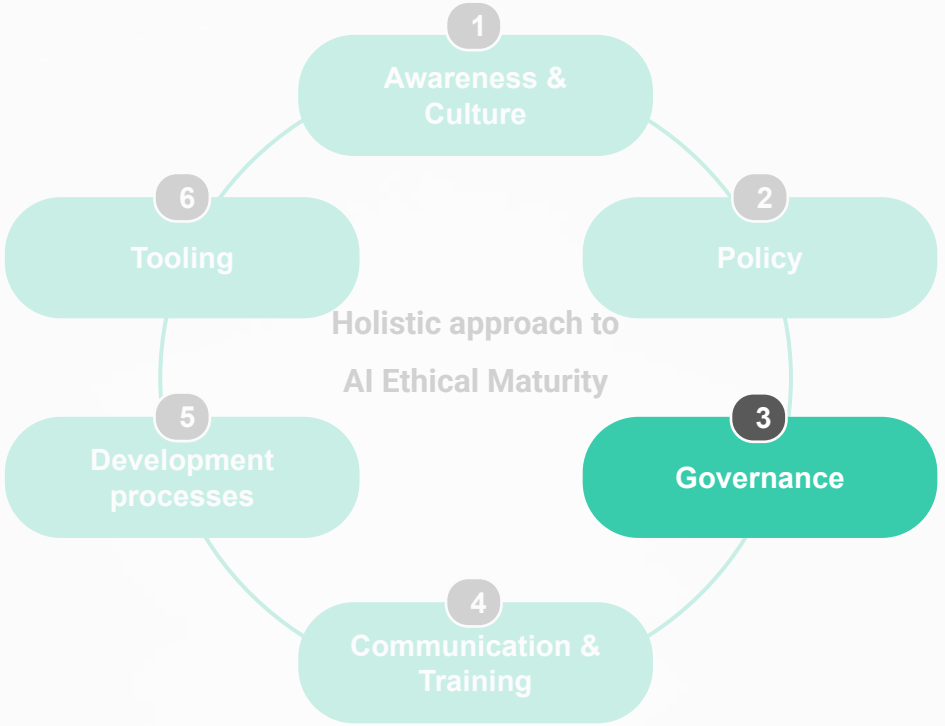

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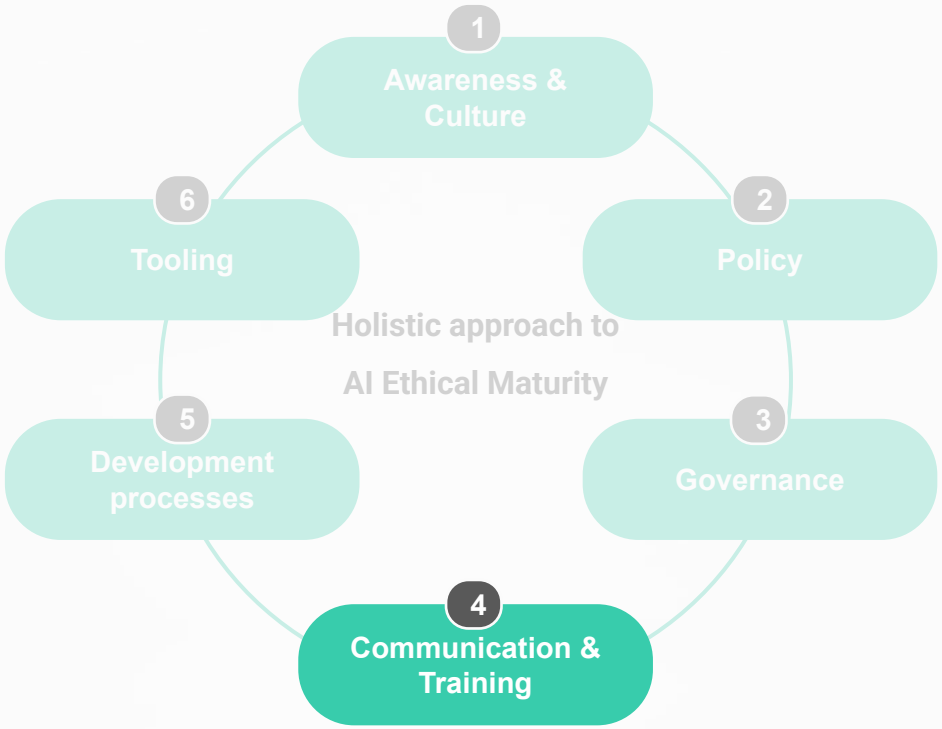
Dimension 4: Communication & Training



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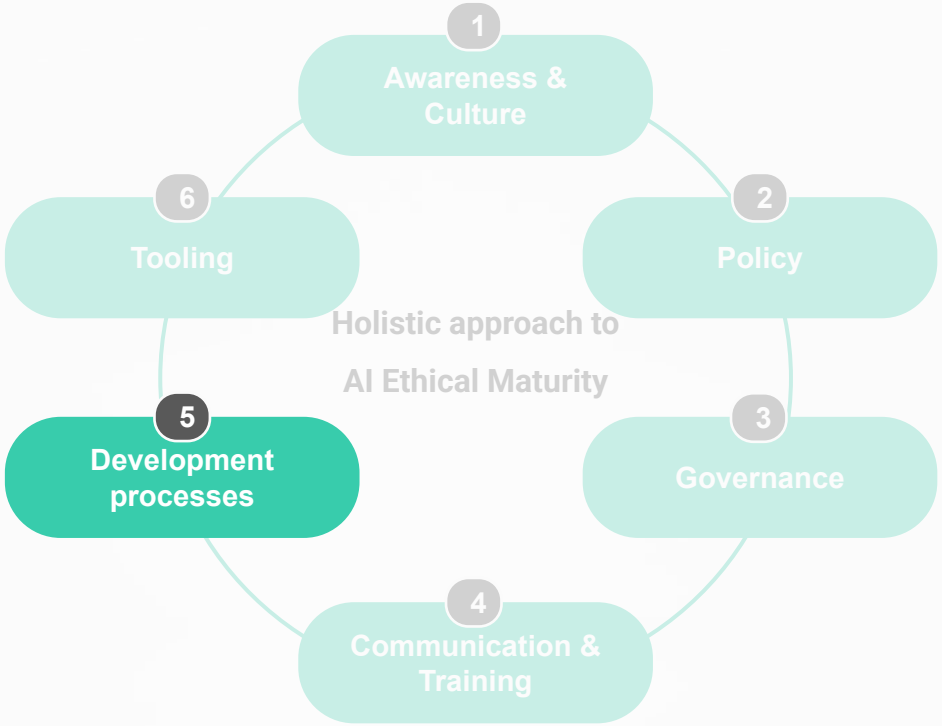
Dimension 5: Development processes

- Organizational **culture**
- Organizational **awareness**
- Organizational **sponsorship**



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Dimension 6: Tooling

- Organizational **culture**
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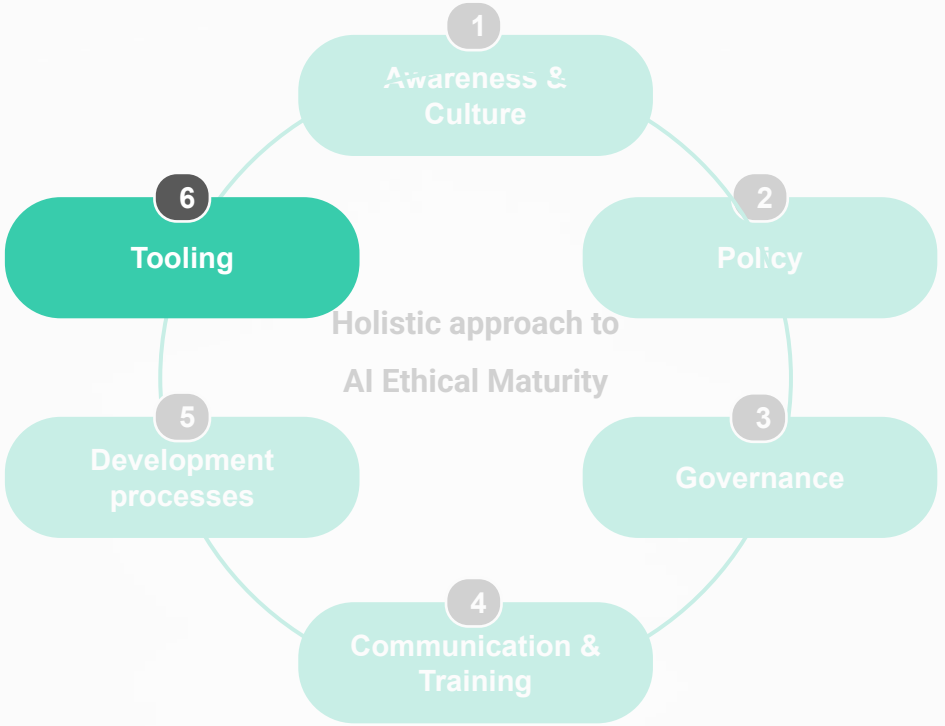

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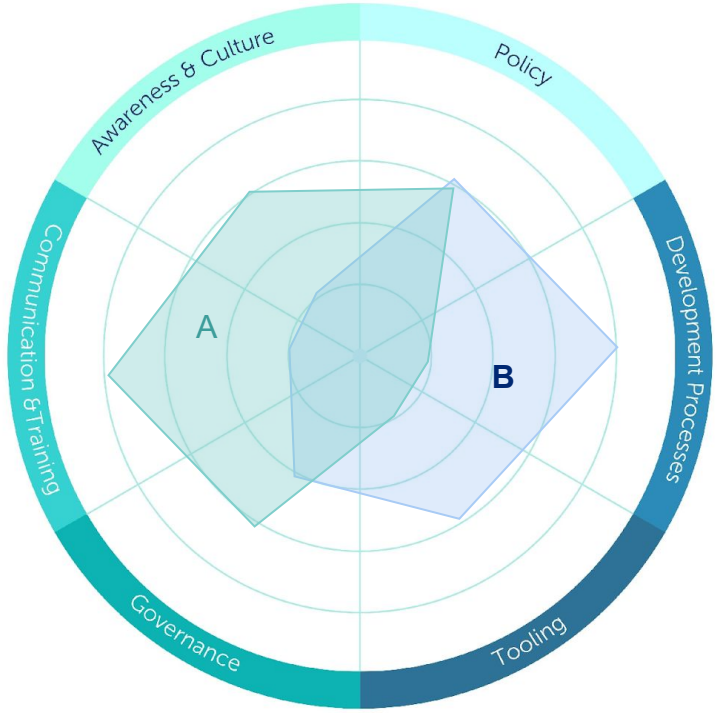
Benchmark + Mutual Learning

Awareness & Culture

Communication & Training

Governance



Policy

Development Processes

Tooling