Pillars and Dimensions of EPAM's Responsible AI framework





FAIR — CONSISTENT, IMPARTIAL, ACCURATE

- Development and governance standards & controls aligned with industry-specific regulatory frameworks
- Periodic leadership debrief outlining validation procedures and results
- Clear and well-understood accountability, responsibility, and escalation structures
- Verified compliance and prioritized high-risk areas based on periodic audits



ACCOUNTABLE — TRANSPARENT, EXPLAINABLE, AUDITABLE, OWNED

- **Distribution shifts** in training/validation/testing datasets are **identified and treated properly**. Pre-deployment Quality is continuously monitored to ensure the data used for AI model training meet the standards of appropriate for its utilization.
- Operational & analytical DQ programs are in place to ensure DQ for global monitoring of enterprise data sources and assets



APPROPRIATE — VALID, SUITABLE

- · Al products assigned to appropriate risk tiers and resources allocated accordingly
- Dimensions of risk and the risk profile identified for every AI model and its lifecycle phases
- Alignment between AI solution and target problem/process validated and justified by key stakeholders



SAFE — PRIVATE, SECURE, RELIABLE, ROBUST

- All appropriate privacy processes are verified to govern usage of data used to train, evaluate data flows & models
- Distribution shifts in training/validation/testing datasets are identified and treated properly pre-deployment to prevent performance decays
- Continuous learning systems monitor overall model performance, to remove bias and ensure transparency, and identify/correct effects of data drift or model decay
- Best practices for enterprise system security extend to attack surfaces inherent to AI systems



GOVERNED — CONTROLLED, DOCUMENTED, TESTED, PERMITTED

- Each lifecycle phase is well understood, executed, governed, and documented
- "Model Inventories" built to monitor overall safety and performance, including ethical aspects
- Documentation processes include internal- and external-facing artifacts, maintained alongside active products.



Responsible Al

As an umbrella of capabilities and unity of functions to help make AI explainable and trustworthy.

The focus is to aide in articulating the underlying processes to increase the overall auditability of the advanced technology.

The Privacy, Security and Compliance considerations must also be kept in check

RESPONSIBLE A

GOVERNMENT AND LAW

BUSINESS CONTEXT

TRUSTWORTHYAI

ETHICAL AI

EXPLAINABLE AI

Causality

Enable learning not mere statistical associations between variables, but an underlying causal relationship

Transparency

Create interpretable and justifiable processes for research, development, & deployment

Auditability

Evaluate algorithms, models, and datasets to analyze the operation, results, and effects

Fairness

Non-discriminatory execution, mitigation of bias on people and social groups

Privacy

Properly handle sensitive data such as personal, financial, confidential, and intellectual property data

Safety

Prevent misuse of sensitive data, neglectful practices for research and development, and unreliable production roll-outs

Inclusivity

Ensure that data and use case diversity allow adequate coverage of all impacted individuals and social groups

Security

Monitor vulnerability, create risk mitigation processes, harden AI models, and defend against malicious attempts

Compliance

Maintain adherence to the regulatory and legal requirements through a fit for purpose governance model

Reliability

Establish behavioral consistency & confidence in Al products outcomes as well as identify deviations from intentions and expectations



EPAM's Responsible AI Framework Delivers AI/ML Transformations, Driven by Business and Enabled by Legal, Technology, and Data Science.

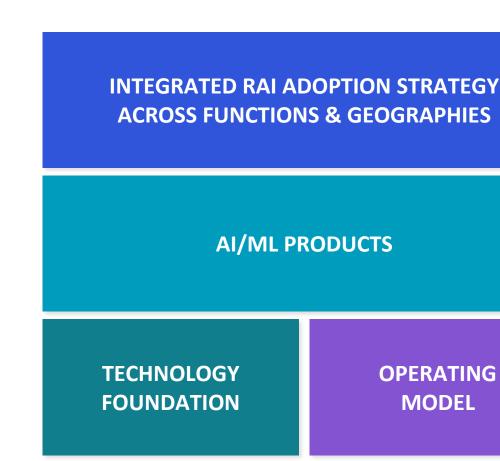
Driven by Business

Global management and business functions may have gaps in Responsible Al coverage and visibility at the process and code levels.

Thorough audits and system checks ensure enterpriselevel Responsible AI health, along with crossfunctional collaboration, continuous education, and fostering transparency and accountability.

Addressing potential gaps enhances the integrity of AI/ML systems, builds trust among stakeholders, and mitigates reputational risks.

Empowering technology stakeholders and developers to adopt standard measurement and documentation practices yields a harmonized view of Responsible AI health across the enterprise.





Unlocked with Tech

EPAM's Responsible AI Offerings

Start anywhere on the journey

Awareness, Alignment, Ambition



It starts with an awareness of the immense potential of **Responsible AI** in an ever evolving regulatory landscape amidst accelerating adoption and demand.

Self -Assessment or Consulting-led assessment of both AI product initiatives and processes.

EPAM's intention assessments are designed to evaluate executive leadership's knowledge of regulatory requirement within relevant jurisdictions and to provide guidance that prepares your organisation for oncoming regulation e.g. Assessment List for Trustworthy AI



Responsible AI - Business Intention Assessment

Demonstrate an Implementation audit



Responsible AI - Product level Implementation Assessment

Perform assessment of ML systems implementation. Components are examined as they align with specific data science product(s) and respective development practices employed within the client organization. The assessment is carried out with the co-operation of the client's CIO/CTO/COO & Line operation managers and technology leadership.

Responsible AI Health – Monitoring and Remediation

Organization level values are assessed at product level and aggregated to depict the overall development ecosystem: e.g. Safety & Value networks Governance: Accountability with Agility



Evolve Responsible AI development through visibility and proactive remediation.

