Navigating Trustworthy AI:

# A Strategic Roadmap to Compliance and Literacy in the Public Sector

*By Darshini Vomkar and Frejdie Søndergård-Gudmandsen*



## Executive Summary

Artificial Intelligence (AI) is becoming a cornerstone of digital transformation in the public sector, promising enhanced efficiency, targeted service delivery, and improved policy decision-making. Although all of this brings significant benefits, it also brings ethical and regulatory complexities, particularly when AI is used in sensitive areas like welfare, justice, or public health.

This whitepaper provides public sector management teams with a strategic roadmap to embed AI literacy and ensure compliance with upcoming legal frameworks such as the EU AI Act. Grounded in Darshini Vomkar's AI Literacy Framework for Trustworthy AI, this document aims to help leadership teams operationalize responsible AI adoption while maintaining trust, accountability, and transparency in public service.

Drawing on Darshini Vomkar's AI Literacy Framework for Trustworthy AI and the emerging requirements of the EU AI Act, this document explores the foundational elements of AI literacy, practical steps for operationalizing compliance, and recommendations for transforming organizations through informed engagement with AI. The suggested roadmap is strategic, actionable, and scalable, — suitable for businesses across industries aiming to lead in responsible AI innovation while enhancing AI compliance.

## The AI Imperative: Why It Matters Now

Governments and public institutions are under increasing pressure to innovate responsibly. AI technologies offer significant advantages in automating public services, detecting fraud, forecasting resource needs, and personalizing citizen interactions. However, these same systems—if poorly understood or misapplied—can lead to biased outcomes, legal violations, and public mistrust.

Unlike the private sector, public institutions must operate with greater scrutiny and uphold democratic principles. Missteps in AI deployment may result in the erosion of civil rights and societal backlash. For management teams, AI readiness now means not just ensuring the teams are equipped with knowledge of how to build or use AI tools, but also fostering literacy to navigate ethical, legal, and societal impacts.

High-profile incidents—such as biased algorithmic decisions in welfare systems or erroneous recommendations by AI-driven content engines—have triggered public backlash and regulatory scrutiny. The introduction of the EU AI Act signals a shift from voluntary ethical frameworks to mandatory legal compliance. Trustworthy AI is not simply a moral imperative; it is a regulatory and strategic necessity. Trustworthiness in AI is the confidence that a system will perform as intended when solving a problem and it can be strengthened when an AI system provides clear decision explanations, operates reliably, upholds privacy, and remains unbiased.

To realize AI's full potential while managing its risks, organizations must cultivate a strong foundation in AI literacy across all stakeholder groups. Understanding what AI is, how it functions, and the ethical ramifications of its application is crucial for responsible innovation.

## Core Challenges Companies Face with AI

Despite increasing AI investment, most organizations are underprepared for its ethical and legal dimensions. The research reveals recurring challenges:

1. *Low AI Literacy*
   Employees, including decision-makers and developers, often lack the necessary understanding of AI technologies, methodologies, and compliance implications. Misconceptions about AI capabilities lead to misuse or overreliance on black-box systems.

2. *Fragmented AI Governance*
   Without cross-functional collaboration, ethical and legal considerations are siloed. Legal teams may not grasp the technical nuances of AI, while developers may be unaware of regulatory constraints.

3. *Ambiguity in AI Classification*
   There is no unified understanding of AI system types, leading to inconsistent classification labeling of AI systems. This makes it harder to evaluate risk levels and apply appropriate governance controls.

4. *Regulatory Blind Spots*
   Many companies mistakenly believe that GDPR compliance is sufficient for AI governance. This overlooks the broader ethical principles outlined in the EU AI Act. The complexity in understanding AI compliance requirements coupled with a lack of guidance and established AI regulatory bodies exacerbates the blind spots.

The above challenges accentuate the need for AI literacy not only at the user level but also as a strategic capability embedded into organizational culture and systems.

# AI Literacy as Strategic Infrastructure

AI literacy is a holistic proficiency that spans various subject areas and different levels of knowledge and skills, which enables individuals to effectively engage with AI in meaningful ways. AI literacy in the public sector must be addressed as institutional infrastructure. It is not enough to train data scientists or compliance officers; every level of leadership and staff must possess a role-appropriate understanding of AI systems, their capabilities, and associated risks.

Also, the EU AI Act mandates AI literacy among providers and deployers, reinforcing its legal relevance. Tailoring training by role ensures responsible usage and reduces regulatory exposure.

In her six-level AI literacy pyramid, Darshini Vomkar shows AI ethics as an essential and integral element expanding the taxonomic classification of cognitive skills, and defining the levels and framing them within a business context. Adapted and enhanced to be specifically applicable to public organizations, her model can be translated into concrete levels of AI literacy as follows:

- Executives need strategic literacy to understand AI implications for policy and governance.

- Operational managers must assess AI project proposals and integrate compliance checks.

- Civil servants at the frontline must interpret AI outputs and support equitable citizen interactions.

Embedding this model into training programs, onboarding, and procurement processes ensures that literacy becomes a living part of the organization, not a one-time initiative.

1. *Know and Understand AI*
   Foundational awareness of AI concepts, its function and limitations.

2. *Apply and Analyze AI*
   Practical application of AI tools within relevant business contexts.

3. *Evaluate and Create AI*
   Critical evaluation and hands-on development of AI systems.

4. *Address Ethical Issues in AI*
   Understanding fairness, accountability, bias, transparency, safety, and environmental impact.

This model empowers organizations to align literacy initiatives with roles, from executives and product managers to compliance officers and data scientists, with ethics embedded at the core of every level. AI ethics must be embedded as a guiding thread throughout every level in AI Literacy.
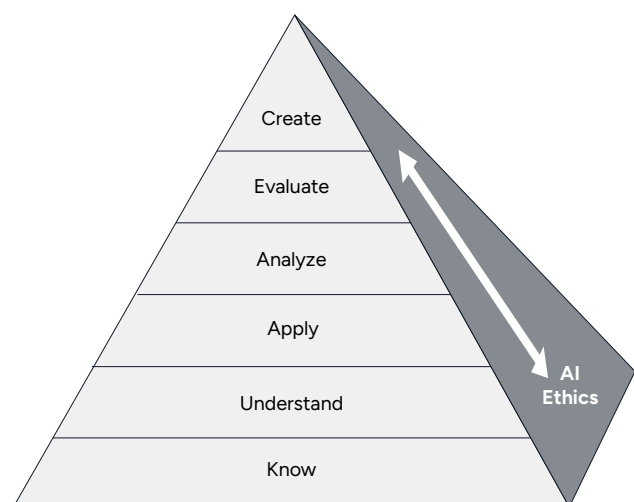


*Figure 1: AI Ethics and Literacy Level*

## Types of AI and Their Risks

Understanding AI begins with classification. AI systems vary by capability, functionality, and risk level:

### Technological Types

Include machine learning (ML), natural language processing (NLP), deep learning (DL), Neural Network (NN), Genetic Algorithms (GA) and robotics. These vary in data needs, complexity, and interpretability.

### Capability-Based Types

Ranging from Artificial Narrow Intelligence (ANI) to hypothetical Artificial General Intelligence (AGI) and Artificial Superintelligence (ASI). Most current systems are ANI.

### Functionality-Based Types

Includes reactive machines, limited memory systems, theory of mind AI, and self-aware AI (theoretical).

### Risk-Based Types (EU AI Act)

- *Unacceptable risk*
  Prohibited AI systems that manipulate behavior or violate rights.

- *High risk*
  AI systems used in critical areas like employment, law enforcement, or healthcare.

- *Limited risk*
  Systems requiring transparency, such as chatbots.

- *Minimal risk*
  Systems like spam filters or game AI.

By linking AI literacy efforts to different classification of AI organizations can tailor risk-based training and prioritize oversight.

| Based on technique: | NLP, NN, ML, DL, Robotics and Genetic Algorithms | |
|---|---|---|

| Types based on capability | Types based on funtionality | Examples |
|---|---|---|
| **Artificial Narrow Intelligence-ANI** (Narrow, weak or specialized AI) | Reactive Machine AI | • IBM Deep Blue<br>• The Netflix Recommendation Engine<br>• Spam filters |
| | Limited Memory AI | • Self-driving cars<br>• Virtual assistants and chatbots like Siri, Alexa, Google Assistant<br>• Generative AI like ChatGPT, Bard, DeepAI<br>• General Purpose AI |
| **Artificial General Intelligence-AGI** (General, generic or strong AI) | Theory of Mind AI | • General Purpose AI "evolved"<br>• Emotion AI<br>• Tesla Optimus (capability as AGI, but functionally Limited Memory AI like seld-driving cars) |
| **Artificial Super Intelligence-ASI** (Super AI) | Self-Aware AI | • Emotion AI "evolved" (may be) |

*Figure 2: Classification of AI*

## Lifecycle Blueprint: Ethical AI by Design

The next important element in AI literacy is the understanding of how AI solutions are built and the importance of ethics all through. Embedding ethics into AI development requires systematic alignment with the AI lifecycle. The CRISP-DM model offers a useful template in achieving this by defining 6 distinct phases:

- *Business Understanding*
  Define goals, constraints, and ethical boundaries in the form of business use cases.

- *Data Understanding*
  Examine sources, biases, quality and data limitations.

- *Data Preparation*
  Ensure fairness, anonymization, and legal compliance.

- *Modeling*
  Choose interpretable and auditable algorithms.

- *Evaluation*
  Assess model performance on accuracy and ethical metrics.

- *Deployment*
  Maintain human oversight, document decisions, and ensure continuous monitoring.

At each stage, different levels of AI literacy are required, and specific roles demand a minimum level of literacy in particular areas. For example, developers require high technical literacy, legal teams need regulatory literacy, and managers benefit from strategic and operational literacy.

## Understanding the EU AI Act

The EU AI Act is the most comprehensive legal framework for AI to date, and it aims to standardize the EU internal market by creating a uniform legal framework for AI systems' development, deployment, and use. Put into force on August 1, 2024, it enshrines seven ethical principles into law:

1. *Human agency and oversight*

2. *Technical robustness and safety*

3. *Privacy and data governance*

4. *Transparency*

5. *Diversity and fairness*

6. *Accountability*

7. *Societal and environmental well-being*

These principles are not advisory. They are mandatory for high-risk AI systems and will be fully applicable from August 2, 2026. Compliance includes documentation, risk management, human oversight mechanisms, and transparency obligations as minimum.

The Act integrates and encourages AI Literacy. Companies must not only train their staff but ensure that affected individuals (e.g., customers or citizens) are made aware of their interactions with AI and their rights.

## Organizational Readiness: What It Takes

Public sector organizations can demonstrate AI leadership by making readiness a structural priority. Core recommendations include:

- Appoint a Chief AI Officer or Ethics Lead to coordinate strategy and compliance.

- Establish AI impact assessments and citizen consultation mechanisms.

- Mandate literacy benchmarks for all roles involved in AI-related workflows.

- Align AI projects with transparency standards, including public reporting on ethics compliance.

By aligning internal readiness with external accountability, public institutions can model ethical AI governance while fostering public confidence in digital transformation.

- *Cross-Functional Alignment*
  Form ethics committees with representatives from legal, compliance, technical, and business units.

- *Training Programs*
  Develop tiered training aligned with AI system risk and employee roles.

- *Policy Integration*
  Embed AI ethics and literacy into existing SOPs, procurement policies, and project planning templates.

- *Monitoring Mechanisms*
  Establish KPIs for literacy, compliance audits, and ethical performance.

Without these building blocks, organizations may risk regulatory non-compliance or reputational harm despite good intentions. The below framework suggested in the research supports organizations to operationalize ethical AI principles for successful development, implementation and adoption of trustworthy AI systems.
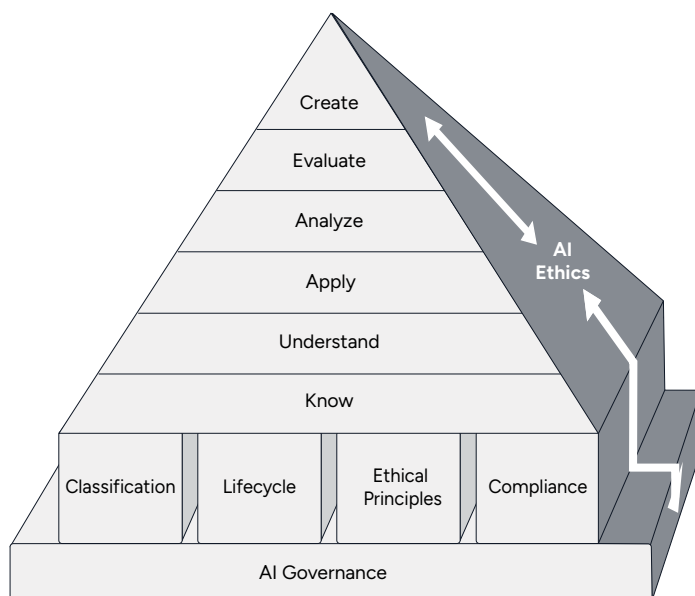


*Figure3 : AI Literacy Model for Enhancing AI Compliance*

## Strategic Roadmap for AI Literacy and Compliance: What's Next

This white paper recommends that organizations adopt a strategic, stepped approach to address the challenges of AI development, meet regulatory requirements, and enhance AI compliance.

### Short-Term (0–6 Months)
- Conduct organization-wide AI literacy audits.
- Create a taxonomy of existing and planned AI use cases.
- Form AI governance and compliance task forces.

### Mid-Term (6–18 Months)
- Launch modular literacy programs (basic to advanced).
- Establish checklists aligned to CRISP-DM and the EU AI Act.
- Develop internal AI documentation standards and review cycles.

### Long-Term (18+ Months)
- Institutionalize AI ethics boards with decision authority.
- Implement automated compliance assessments.
- Partner with academia and civil society to refine practices.

## Conclusion and Call to Action

AI literacy is a keystone for ethical, sustainable, and legally compliant AI adoption. It is not a training checkbox but a cultural shift that requires executive sponsorship, cross-functional ownership, and constant reinforcement.

Organizations that embed literacy into their operations will be better prepared for regulatory shifts and market expectations. This whitepaper offers a starting point; the challenge ahead is implementation at scale. By investing in AI literacy now, companies gain not only compliance but also strategic agility, trust, and long-term competitiveness.

In the public sector, the adoption of AI technologies is particularly sensitive due to the direct impact on citizens' rights, access to services, and perceptions of institutional trust. AI initiatives, whether in social welfare distribution, judicial systems, or public healthcare, must be held to the highest standards of transparency, fairness, and accountability.

Public sector organizations are increasingly turning to AI to enhance efficiency, forecast demand, and automate decision-making. The implications of these technologies stretch beyond performance metrics; and any misuse or misunderstanding of AI can erode public trust and lead to social harm.

This whitepaper is tailored for management teams in public sector organizations who face the dual pressure of driving digital transformation while upholding democratic values and adhering to strict regulatory frameworks. By focusing on AI literacy as the foundation for responsible adoption, public institutions can align innovation with ethical governance and public accountability.

Management teams must recognize that unlike private enterprises, public institutions operate under a social contract that prioritizes citizen welfare. Therefore, integrating AI literacy is not merely a question of workforce upskilling but a structural necessity to ensure inclusive, just, and transparent service delivery.

Furthermore, AI systems used in the public sector often fall under the 'high-risk' category defined by the EU AI Act. This includes systems used in education, employment, law enforcement, and access to essential services. Understanding and navigating this risk landscape requires a well-informed leadership team with both strategic vision and operational insight.

For public institutions, AI literacy must be developed across three tiers:

- *Policy and Governance Level*
  Executives and directors must understand the ethical and legal context of AI, enabling them to make informed decisions and allocate resources appropriately.

- *Operational Management*
  Middle managers must be capable of assessing AI project proposals, understanding compliance checklists, and monitoring implementation.

- *Frontline Professionals*
  Employees interacting directly with AI systems or data must be trained to identify risks, follow ethical procedures, and engage with affected citizens appropriately.

This tiered approach ensures that AI literacy is not siloed but integrated across the organization. For management teams, this means initiating culture change, championing cross-departmental collaboration, and making literacy a performance metric.

In the public sector, readiness also includes the ability to engage with external stakeholders such as civil society, regulatory agencies, and the general public. This adds layers of accountability and transparency that must be reflected in organizational structures.

Recommendations for public sector readiness include:
- Appointing Chief AI Officers or Ethics Leads who report to senior leadership.

- Embedding AI impact assessments into funding and procurement procedures.

- Requiring all AI project proposals to include a public ethics statement and consultation plan.

- Publishing literacy and governance benchmarks as part of annual transparency reports.

- These steps reinforce the public sector's duty to lead by example in ethical AI adoption.

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## About the Authors

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Darshini is an independent expert specializing in Digital Transformation, AI, and Change Management. With expertise in driving IT projects that align with business objectives, she is committed to further applying her expertise in adopting AI, while ensuring governance and compliance. Her background spans Project Management, IT processes and operations, alongside she has extensive experience in Management and IT Consulting, where she supported organizations in shaping and executing their digital strategies.

Darshini holds a Master of Science in Business Administration and Digital Business from Copenhagen Business School, with a focus on AI. From supporting organizations in building responsible AI strategy to facilitating workshops that identify high-ROI AI use cases, she is dedicated to fostering an ethically-driven future for trustworthy AI.

Frejdie is Head of Product Management at cBrain, where she leads the strategic development of cBrain F2®, a core platform in Denmark's digital public sector.With a background in Communication and IT, she bridges technical insight with organizational and societal understanding to deliver sustainable, trusted digital services.

In addition to her role at cBrain, Frejdie serves as an external lecturer at the University of Copenhagen and CBS, teaching courses in IT infrastructure, cybersecurity, privacy, and innovation.

With deep practical expertise in aligning AI technologies with public sector requirements — including regulatory compliance, data governance, and ethical accountability — Frejdie has successfully led the development and implementation of complex solutions in politically governed and highly regulated environments.

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