A COMPREHENSIVE APPROACH TO TRUSTWORTHY DATA AND AI GOVERNANCE

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THE BUSINESS NEED FOR ETHICS IN AI

$134B

Is what Gartner estimate the AI software market will reach in 2025.[2]

62%

Place higher trust in a company whose AI interactions they perceive as ethical.[3]

Worldwide spending on AI, including AI-enabled applications, infrastructure, and related IT and business services, will more than double by 2028, when it is expected to reach $632 billion, according to a new forecast from IDC.[1]

AI is revolutionizing human life and unlocking a whole new world of innovation – from helping doctors diagnose medical conditions earlier, allowing researchers to innovate new medications to treat those conditions, and enabling more effective conservation of threatened species and habitats. As AI becomes more prevalent, it will affect nearly every aspect of society, from our professional to personal lives.

AI also poses significant risks if it is created, deployed and managed without intentionality and discipline. For example, AI systems trained on biased data may learn historical patterns of discrimination against women, people of color or vulnerable populations. If biases in AI systems are not identified and mitigated before deploying and using them, those deployed systems may inherit social biases and cause unintended consequences at scale.

Recent studies show[4] that consumer trust in government and societal institutions is extremely low, and businesses are now the sole institutions that are perceived as competent and ethical. Businesses are now under pressure to maintain consumer trust – and to do this, they will need to handle AI responsibly.

Organizations that can demonstrate responsible and ethical use of AI are likely to be more commercially successful. Consumers and employees expect businesses to stand up for them and act ethically and competently, as 63%[4] of consumers buy or advocate for brands based on their beliefs and values. This need for consumer trust in organizations also applies to the organizational use of AI. 62%[3] of consumers place higher trust in a company whose AI interactions they perceive as ethical. Of those customers, 59%[3] have higher loyalty to the company and 55%[3] purchase more products, providing high ratings and positive feedback on social media. Consumer trust that organizations use AI responsibly is essential for continued business success.

This is where trustworthy AI – a system designed to ensure safety, reliability and ethical practices – can help.

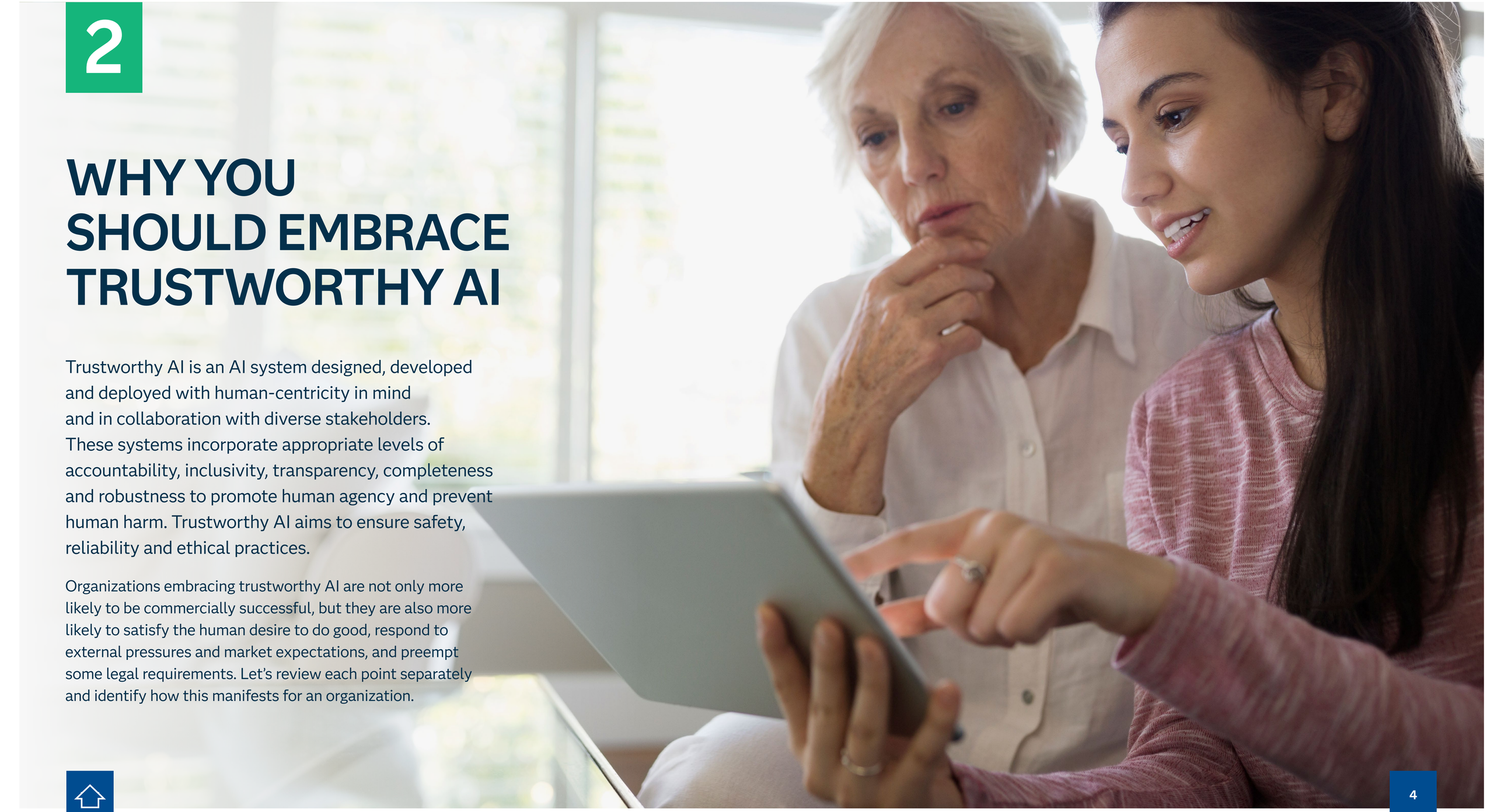
1 https://www.idc.com/getdoc.jsp?containerId=prUS52530724
2 https://www.gartner.com/en/documents/4007140
3 https://www.capgemini.com/gb-en/insights/research-library/why-addressing-ethical-questions-in-ai-will-benefit-organisations/
4 https://www.edelman.com/sites/g/files/aatuss191/files/2023-03/2023%20Edelman%20Trust%20Barometer%20Global%20Report%20FINAL.pdf

2

WHY YOU SHOULD EMBRACE TRUSTWORTHY AI

Trustworthy AI is an AI system designed, developed and deployed with human-centricity in mind and in collaboration with diverse stakeholders. These systems incorporate appropriate levels of accountability, inclusivity, transparency, completeness and robustness to promote human agency and prevent human harm. Trustworthy AI aims to ensure safety, reliability and ethical practices.

Organizations embracing trustworthy AI are not only more likely to be commercially successful, but they are also more likely to satisfy the human desire to do good, respond to external pressures and market expectations, and preempt some legal requirements. Let's review each point separately and identify how this manifests for an organization.



2

THE INNATE DESIRE TO DO GOOD

Very few, if any, organizations exist for the purpose of causing harm. Leaders who deploy AI solutions commonly do so in a reasonable pursuit of organizational goals in alignment with their organizational values – not with the intent of exposing others to injury or loss. Nonetheless, unintentional harms often occur due to a lack of awareness, expertise or planning. For example, without a serious commitment to identify and minimize harm, creators and users of AI may perpetuate discrimination and exploitation.

To establish an organizational commitment to trustworthy AI, it is essential to align the reason for trustworthy AI to existing organizational values. Organizations need to articulate what values drive their commitment to trustworthy AI.

ACTION ITEM

Identify your internal motivations for trustworthy AI.

Before introducing AI technology into your business, consider how your organizational values can inform your commitment to trustworthy AI. Engage in internal conversations early. Consider these questions:

- **What are your key organizational values?**
- **How will these values inform your commitment to trustworthy AI?**

2

EXTERNAL PRESSURES TO DO GOOD

It is important to also consider the external pressures for embracing trustworthy AI. A 2021 study found that 69% of consumers believe brands must positively change the world. Consumers want to do business with companies that demonstrate a strong moral compass and proven commitment to doing what is right.

Trustworthy AI can help organizations showcase a commitment to doing what they perceive as right, which commonly includes harm avoidance and openness for accountability. Organizations also need to create an environment that fosters responsible innovation and supports the development and deployment of trustworthy AI, as expected by consumers and needed by society. These guardrails are needed now more than ever, as highlighted by the studies cited in the introduction.

ACTION ITEM

Assess your external market.

Engage with your customers and partners to understand their concerns and beliefs about AI. Demonstrate that you understand the need for trustworthy AI within your industry. Aligning with your customers and prospects is key to effectively creating and communicating your strategy for responsible and trustworthy AI innovation. Consider these questions:

- **What are the unique needs for trustworthy AI within your industry?** How can you identify and address these needs?
- **How can we effectively initiate a dialogue with our customers and partners regarding the need for trustworthy AI?** How do your customers perceive your potential use of AI?
- **What are the specific concerns and beliefs around AI that our customers and partners hold?** How can we better understand these concerns and beliefs?

By working together, we can create an environment of trustworthy AI and responsible innovation that benefits everyone.

For organizations to survive, they have to think about how they can be more innovative and how they can leverage data and AI... and in doing so, not impacting the society in a harmful manner.

PREETI SHIVPURI – TRUSTWORTHY AI AND ETHICS LEAD, DELOITTE

2

GROWING REGULATION

Governments worldwide are trying to balance the benefits of AI with the need to protect citizens from the potential negative consequences of AI-driven decisions. As a result, the global regulatory landscape around AI is changing fast as countries publish best practices, laws and non-binding recommendations.

For example, the proposed EU AI Act is widely recognized as the first comprehensive AI framework that classifies AI systems into multiple levels of risk and sets prescriptive requirements for each level based on the category of use. Other countries have taken a less prescriptive approach and instead have relied on advisory frameworks to guide the development and consumption of AI solutions.

Still, other regulators are taking an even more hands-off approach by allowing the industry to self-regulate their AI solutions. Without understanding the relevant regulations and guidelines, companies may find themselves misaligned with best practices or non-compliant with requirements.

ACTION ITEM

Identify relevant regulation.

Be proactive! If your organization is considering purchasing or leveraging AI solutions, you will likely face additional regulatory expectations soon. Familiarize yourself with the pending regulations relevant to your markets and align your organizational strategy to the direction of the laws. This proactive work will ensure that your organization is not surprised or scrambling to adhere to the regulations once they are enacted. Consider these questions to get started:

- **What pending AI regulations might impact your organization or customers?**
- **How might your business operations need to change in preparation for upcoming regulations?**
- **What strategies can you adopt to stay current on the rapidly evolving regulatory landscape surrounding AI?**

3

ESTABLISHING TRUSTWORTHY AI GOVERNANCE

After organizations identify their internal motivations, assess their external pressures and identify regulatory requirements, they can establish trustworthy AI governance.

Cultivating a trustworthy AI environment within an organization requires a comprehensive strategy that helps establish oversight, ensure compliance, develop consistent operations and infrastructure and foster a culture of trustworthy AI.

Data ethics involves grounding data-related decisions in the organization's brand values and a clear understanding of the potential financial and reputational impacts of a data misstep.

THE RISING IMPORTANCE OF DATA ETHICS - DELOITTE

3

OVERSIGHT

The first step is establishing a system of oversight, which includes the framework for AI governance, AI strategy and formulation of policies. While establishing the system of oversight, it is essential to draw deeply from the intrinsic motivators that drive the organization. These intrinsic motivators help define an organization's own approach to responsible innovation and will inform its trustworthy AI strategy.

Some organizations also find it useful to implement a risk-based approach to AI development. Understanding an organization's risk appetite, tolerance and threshold may assist in establishing corporate strategy, policy and oversight of the design, development, deployment and use of AI systems.

While aligning trustworthy AI strategy with their broader business strategy, organizations should consider the potential impact of this alignment and the necessary adjustments to ensure success. For example, if an organization embraces transparency as part of its trustworthy AI strategy, it will require clear, explainable communication. Since transparency helps people understand how decisions are made, organizations should communicate models' intended scope and outcomes, identify potential biases and foster user trust. Organizations need to be able to communicate what, why and how their data-driven systems work. This means, for example, that companies using AI-enabled chatbots may decide to notify customers that all chatbots are run by AI solutions. Similarly, companies using AI decision making may document this in a customer FAQ and keep the logic and inputs of the decision-making AI solution up to date.

Organizations should also assess their current governance policies and consider that changes are required to support the prioritization of trustworthy AI. Assessing and adapting policies can ensure that appropriate checks and balances are in place to monitor and regulate AI systems used within the organization. This step should not require a complete overhaul of existing policies; instead, it calls for a fine-tuning of the current policies to align with the principles and strategy for trustworthy AI.

ACTION ITEM

Start planning for AI governance.

To establish AI governance, strategy and enforcement, consider these three essential steps:

- **Establish principles for trustworthy AI that align with your organizational "why."**
- **Develop a trustworthy AI strategy that complements your overall business strategy.**
- **Adapt and enforce governance and accountability policies to accommodate the new strategy.**

3

COMPLIANCE

After establishing the oversight frameworks, an organization can consider its compliance needs. First, it is essential to assess and monitor its readiness for regulations. The organization can draw from the assessment of the regulatory landscape for its industry and then look inward to decipher whether it is prepared to comply.

Second, it's important to identify risks that go beyond regulatory compliance. These risks can vary depending on the industry or customer base, but they may include reputational and financial risks. Effective risk management systems will allow an organization to proactively identify risk factors as the AI solution continues to be used.

Organizations will also need a contingency and mitigation plan, as well as a quality management system. While most strive to be trustworthy innovators, mistakes are always possible. By having a proactive contingency and mitigation plan in place, an organization can effectively handle non-ideal scenarios. This approach enables an organization to be proactive rather than reactive, which will help maintain the trust and confidence of stakeholders, even in challenging situations. Each organization must determine which mitigation approach is most appropriate to its risk tolerance levels.

ACTION ITEM

Start planning for compliance.

To establish a robust system for compliance, consider these three essential steps:

- **Assess and monitor your organization's readiness for regulation.**
- **Identify risks and implement risk management systems.**
- **Create a contingency and mitigation plan.**

3

OPERATIONS

In addition to compliance and risk management, organizations should consider their operating procedures around AI and data management. Leadership should curate operational procedures that make sense for the organization based on the governance and strategy established in the oversight pillar. For example, if the organization has decided to establish an AI Oversight Committee, then during this step, the leadership should create the process by which the committee will review AI systems and assign the reviewer roles with appropriate stakeholders. These procedures should be practical, actionable and easy to implement.

Once these procedures have been established, it's essential to embed them into the deployment and operations of AI. This may require modification of existing procedures or the creation of entirely new ones.

As the organization's data and AI journey evolves, it's likely that multiple tools, software, vendors and other factors will come into play. Organizations should assess their AI vendors for consistency with their own organizational principles. Consistency across its entire ecosystem will allow the organization to maintain a cohesive approach to trustworthy AI.

ACTION ITEM

Assess your ecosystem participants for consistency.

To assess your AI vendors for consistency with your organizational principles, take these three essential steps:

- **Curate procedures for AI and data management.**
- **Embed procedures into deployment and operations.**
- **Analyze infrastructure for consistency of procedures.**

3

CULTURE

Employees are an essential component of fostering a trustworthy AI environment. As an organization adapts to the system for trustworthy AI, social norms will naturally develop. It is key to foster shared norms that align with organizational principles and strategy. This creates a positive culture where employees feel competent and empowered to engage in trustworthy AI practices, even when leadership is not present.

Finally, it's crucial to cultivate a culture of resilience. As technology evolves, an organization must keep up with the changes. By fostering a culture of resilience, the leadership can ensure that their teams are adaptable and ready to face new challenges as they arise. This approach helps maintain the trust of stakeholders and demonstrates a clear commitment to responsible innovation over the long term.

A comprehensive approach to trustworthy AI requires a framework for AI governance, compliance, operations and an organizational culture that aligns with the corporate "why" for trustworthy AI.

By embracing trustworthy AI, an organization's leadership can create a culture of responsibility, accountability and resilience, instilling trust in stakeholders and demonstrating a commitment to responsible innovation over the long term.

ACTION ITEM

Foster a trustworthy AI environment.

To ensure that your organization creates a culture of Trustworthy AI, consider these three essential steps:

- **Instill awareness of responsible innovation practices.**
- **Foster shared norms and employee competency.**
- **Cultivate a culture of resilience.**

4

TRUSTWORTHY AI AT SAS

To illustrate how this comprehensive approach to AI governance manifests within an organization, consider SAS. At SAS, we believe that there is no inherent goodness or malice in AI technology. Instead, there are risks and rewards.

OUR "WHY"

Our commitment to trustworthy AI is based on our mission to provide knowledge in the moments that matter and our belief that building trust in technology is critical to our future – and the future of our industry.

OUR EXTERNAL PRESSURES

As one of the first AI and analytics companies, we understand that technology does not exist in a vacuum. We believe that both vendors and customers have a role to play in ensuring that technology is used ethically and responsibly. We provide our customers with reliable and trustworthy technology solutions that they can use to drive progress within their own industries.

RELEVANT REGULATIONS

From the technology we develop to the corporate policies we put in place, SAS stays on top of industry standards and regulations by working with multiple third-party and regulatory frameworks.

Our vision is a world where data empowers people to thrive. We pursue that vision through trustworthy and responsible innovation.

REGGIE TOWNSEND, VICE PRESIDENT, SAS DATA ETHICS PRACTICE

4

TRUSTWORTHY AI AT SAS

The combination of our “why,” external pressures and regulations have led us to identify six principles that guide our trustworthy AI strategy:

These principles help everyone at SAS navigate, manage and negotiate ethical tensions in the most productive and least harmful ways feasible. They also guide our comprehensive AI governance. Orchestrated by our Data Ethics Practice (DEP), we centralize trustworthy AI strategy and decentralize trustworthy AI. This is done with a focus on cross-disciplinary, global participation to capture a breadth of viewpoints to ensure that our platform, processes and services keep the focus on people and always with an “ethical by design” approach throughout product development and market strategy.

1. Human centricity: Promote human well-being, human agency and equity.
2. Inclusivity: Ensure accessibility and include diverse perspectives and experiences.
3. Accountability: Proactively identify and mitigate adverse impacts.
4. Transparency: Openly communicate intended use, potential risks and how decisions are made.
5. Robustness: Operate reliably and safely while enabling mechanisms that assess and manage potential risks throughout a system’s life cycle.
6. Privacy and security: Protect the use and application of an individual’s data.

4

HOW THE SAS DATA ETHICS PRACTICE SUPPORTS TRUSTWORTHY AI

OVERSIGHT

This quadrant ensures that internal and external AI-enabled technologies and processes adhere to data ethics principles. The oversight quadrant in the DEP advises leadership on sales, consulting, product development and procurement opportunities involving AI.

COMPLIANCE

At SAS, we call this quadrant “controls.” The compliance members monitor, audit and seek compliance with data ethics principles. The compliance quadrant in the DEP provides organizational checks and balances to identify mitigation needs before AI-related technologies and services are made public.

OPERATIONS

At SAS, we call this the “platform.” The platform part of the DEP absorbs and interprets expectations and demand and then develops AI technologies that align with market viability, SAS portfolio synergy, regulatory compliance and data ethics principles.

CULTURE

The DEP cultivates an ecosystem of creators, contributors and consumers of AI for knowledge sharing, collaboration and the normalization of behaviors and practices aligned with data ethics principles.

The [SAS] Data Ethics Practice is about making sure that wherever our technology shows up, however it gets deployed, that at the end of the day, it doesn't hurt people. We are taking a particular focus on vulnerable populations around the world because the belief is that if we can help the most vulnerable among us, everyone else will be OK.

REGGIE TOWNSEND, VICE PRESIDENT, SAS DATA ETHICS PRACTICE

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FINAL THOUGHTS

By following these action points and adopting a comprehensive approach to trustworthy AI, organizations can navigate the complex landscape of AI, uphold ethical principles and build trust with stakeholders. Trustworthy AI is not only a moral imperative but also a strategic advantage that enables organizations to drive innovation, ensure regulatory compliance and create a positive impact on society. Embracing trustworthy AI is a transformative journey that positions organizations at the forefront of responsible and sustainable AI innovation in the digital age.

Working with SAS, you will not be alone on your journey to find the best ways to apply trustworthy AI and translate principles into practices so that it becomes core to your business strategy and processes. SAS provides tools to support trustworthy AI across the entire data and AI life cycle. SAS® Viya®, a centralized platform, unifies the user experience from managing data and building models to deploying insights.

Automated data and model lineage and robust model management support your governance efforts. And automatically generated, repeatable explanations of data and models in simple language allow for transparent insights. SAS Viya delivers all this and more, simplifying your path to trustworthy AI.

LEARN MORE

about how SAS embraces trustworthy AI and how we can help your organization on your journey.

GO >>

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TRUSTWORTHY AI IN ACTION

Leaders are faced with the ongoing conundrum of when, where and how to introduce AI into business workflows. As this e-book states, many concerns obstruct the adoption of the technology, such as the ability to explain and trust AI outputs.

While summarizing crucial details about something complex like a model is still challenging, work is being done to make this information accessible. Model cards function as a "nutrition label" to highlight accuracy, fairness and model drift, which is the decay of model performance as conditions change. They serve as an added guardrail to support AI governance and model trust and transparency.

SAS offers model cards and AI governance services to support the model life cycle to support AI adoption while mitigating risk.

"SAS is taking a thoughtful approach to how it helps customers embrace AI, focusing on the practical realities and challenges of deploying AI in real industry settings. Model cards will be valuable for monitoring AI projects and promoting transparency.

ERIC GAO, RESEARCH DIRECTOR AT ANALYST FIRM IDC.

Preparing for future viral outbreaks

The Rapidly Emerging Antiviral Drug Development Initiative (READDI) uses advanced technologies to prepare therapeutic drugs for future viral outbreaks. To respond to future threats, the organization captures and integrates massive amounts of historical and medical data to develop effective antiviral drugs.

Using trustworthy AI and machine learning, READDI can manage the full life cycle of models while fostering secure collaboration between research partners. It can evaluate treatment parity through metrics such as equalized odds, equality of false negatives and predictive equality.

"We've already seen the power of bringing together READDI's collected data with SAS Viya and our data scientists. We know there's much more to uncover related to novel target discovery, not only with COVID-19 but with other viral diseases. We see this as a great future opportunity to test the limits of Viya and see how we can continue to support this AI-driven drug discovery platform with READDI's help."

RACHEL HARDIN, HEAD OF MARKET AND BUSINESS DEVELOPMENT FOR US LIFE SCIENCES, SAS

SAS.COM/RESPONSIBLE-INNOVATION

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