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# Adopting AI Responsibly: Guidelines for Procurement of AI Solutions by the Private Sector

INSIGHT REPORT

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# Foreword



**Mudit Kumar**  
Vice-President,  
Consulting, GEP



**Cathy Li**  
Head, AI, Data and  
Metaverse; Member of  
the Executive Committee,  
World Economic Forum

As the use of artificial intelligence (AI) continues to grow across industries, it has become imperative for commercial enterprises to ensure that the AI solutions they procure are responsible and ethical.

The growth of the global AI market is staggering – valued at \$136 billion in 2022 and is [estimated to expand](#) at a compound annual growth rate (CAGR) of 37.3% from 2023 to 2030. The growing use and prevalence of generative AI technology and the emergence of advanced GPT models – with their tremendous potential and unique ethical challenges – underscores an even greater need to establish standards for responsible AI practices and procurement.

Using AI responsibly is important not only because organizations have a social responsibility and a reputation to maintain but also for the long-term viability and well-being of business and society. That includes protecting businesses from potential risks down the road, particularly related to areas such as intellectual property, data and privacy.

While AI systems are rapidly evolving, in-house AI expertise often stays limited, and there are no standard benchmarks and assessment criteria to aid the end-to-end procurement process.

To address this gap, the World Economic Forum, in partnership with GEP, has released a comprehensive guide for commercial organizations, *Adopting AI Responsibly: Guidelines for Procurement of AI Solutions by the Private Sector*.

In this report, we present a structured framework for evaluating the implications of acquiring AI solutions, emphasizing the importance of transparency, accountability and human-centred design from development to implementation. The framework offers guidance on evaluating potential solutions based on bias, privacy and security. It shares recommendations on integrating ethical principles into the procurement criteria and processes, often involving multiple stakeholders. Finally, it offers insights on how to overlay all these steps with strong governance criteria, ensuring that these principles are applied.

In short, this framework is an essential resource for business and procurement leaders who want to guarantee that their organizations are at the forefront of socially responsible AI adoption.

# Executive summary

## Offering practical guidance for responsible procurement and implementation of AI solutions in the private sector.

The demand for artificial intelligence (AI) solutions in enterprises has grown by leaps and bounds in the past few years, driven by improved data availability, advanced algorithms and increased processing power. While the use of AI tools delivers significant value, it is necessary to approach it carefully and avoid its potentially negative, and even dangerous, consequences. The World Economic Forum, in partnership with GEP, has released this comprehensive guide for commercial organizations – across industries – to facilitate the process of identifying, selecting and implementing AI solutions responsibly and ethically.

This report is a practical toolkit that will help navigate the challenges of AI procurement through a structured framework. It is directional, not prescriptive and industry agnostic, not problem specific.

It discusses the need for AI solutions to be closely aligned with business goals, ethical standards and regulatory requirements, as well as the importance of stakeholder collaboration and an enterprise-wide evaluation process. It highlights five key considerations – business strategy, commercial strategy, data strategy, ethics and sustainability, and governance, risk and compliance – against which AI/machine learning (ML) solutions can

be assessed for responsible AI acquisition, with procurement as the orchestrator driving the implementation of this framework.

Broadly, the report provides practical advice on:

- Assessing AI solutions' ethical standards and regulatory compliance
- Aligning solutions with business and commercial goals
- Evaluating their potential impact.

From automating repetitive tasks, reducing errors or risks and optimizing pricing to identifying new opportunities, making accurate forecasts and enabling investment decisions, AI solutions can help enterprises perform a wide range of tactical and strategic activities to improve efficiency and support growth. With careful and responsible procurement, organizations can harness the power of AI to improve their productivity and gain a competitive edge.

The customizable framework in this AI procurement guide aims to open doors for organizations looking to ethically exploit AI's disruptive power.

# Introduction

AI/ML solutions should address strategy alignment, data integration, ethical compliance and risk assessment.

Artificial intelligence (AI) in an enterprise refers to the use of AI technology and applications in private sector organizations to improve operations, increase efficiency and drive growth.

AI adoption in enterprises has grown exponentially over the past decade because of the greater availability of data, the development of more sophisticated algorithms and the increased processing power of computers. Advancements in cloud computing and the emergence of edge computing have also made implementing AI-powered solutions easier and more cost-effective.

However, private sector enterprises find navigating the procurement and deployment of AI technologies a tremendous challenge because of a variety of reasons, from lack of requisite skills to the definition of strategy, data quality and established playbooks to follow. This report aims to facilitate the responsible and ethical procurement of AI/machine learning (ML) solutions in commercial organizations by developing comprehensive guidelines and a practical toolkit that are directional rather than prescriptive. It will help enterprises evaluate AI/ML solutions through a robust procurement framework and build a holistic approach for acquiring and deploying AI solutions to achieve organizational goals.

## Why enterprises need AI

The history of AI in enterprises can be traced back to the early days of computing when businesses first began experimenting with rule-based and expert systems, which were designed to perform specific tasks, such as analysing data and making predictions. These systems were limited in their capabilities and required significant human input to function effectively.

In the 1990s, ML algorithms began to be developed, allowing AI systems to learn from data and improve performance over time. This marked a turning point in the history of enterprise AI, as ML-powered systems could be used to analyse large amounts of data and make predictions more efficiently and accurately. In the 2000s, advancements in computing power and the availability of large volumes of data began to drive the adoption of AI in enterprises. Businesses,

realizing the potential of AI to improve operations and drive growth, started making significant investments in AI-powered systems.

One of the key drivers of AI is **automation**. AI-powered automation can help businesses automate repetitive and time-consuming tasks – such as data entry, customer service and inventory management – and improve speed and accuracy as well as reduce costs. It can free up human workers to focus on more complex and strategic tasks.

AI-powered **decision-making** is another common use case in enterprises, where AI is used to analyse data and provide recommendations to decision-makers. AI can be used to optimize pricing, identify new business opportunities or even make investment decisions.

While AI is becoming an increasingly important tool for organizations, to fully realize its benefits, they need to invest in the necessary infrastructure, talent and technologies. Additionally, businesses should address the challenges associated with acquiring and implementing AI solutions, such as lack of expertise, data privacy and security concerns.

## Why do we need responsible AI procurement guidelines?

**AI/ML adoption is skyrocketing, especially post-COVID-19, with far-reaching impact on businesses**

Organizations worldwide are increasingly adopting AI and ML to support business growth, improve efficiencies and gain a competitive edge. The global AI market is anticipated to hit the \$1,500 billion mark by 2030,<sup>1</sup> driven by the substantial investments made by tech giants in R&D to advance technology. In many cases, AI solutions are deeply embedded into the organization's enterprise applications, making recommendations and predictions and influencing critical decision-making. Thus, it's essential to ensure that AI delivers ethical, responsible and reliable solutions. Organizations must perform critical evaluations of AI solutions at the time of selection and establish an ongoing review process to make sure that the solution remains aligned with business intent and organizational values.

**Limited guidance on industry standard practices and ways to minimize organizational risks**

While nearly all C-suite executives view AI as critical, most acknowledge the struggle to navigate the procurement and deployment of AI technologies. Enterprises must consider some key factors while adopting AI, including:

- **Business strategy alignment:** Does the AI strategy align with larger corporate strategy? Does the AI solution enable optimized business outcomes, delivering high value to the organization? How does it align with long-term organizational vision and strategy?
- **Business case:** What are the non-monetary gains? Is the investment justified? Are commercial terms optimized for long-term return on investment (ROI) and total cost optimization?
- **Technology and data integration:** Does the solution meet the company's and regulatory data protection requirements? How do you regulate the outsourcing of data management

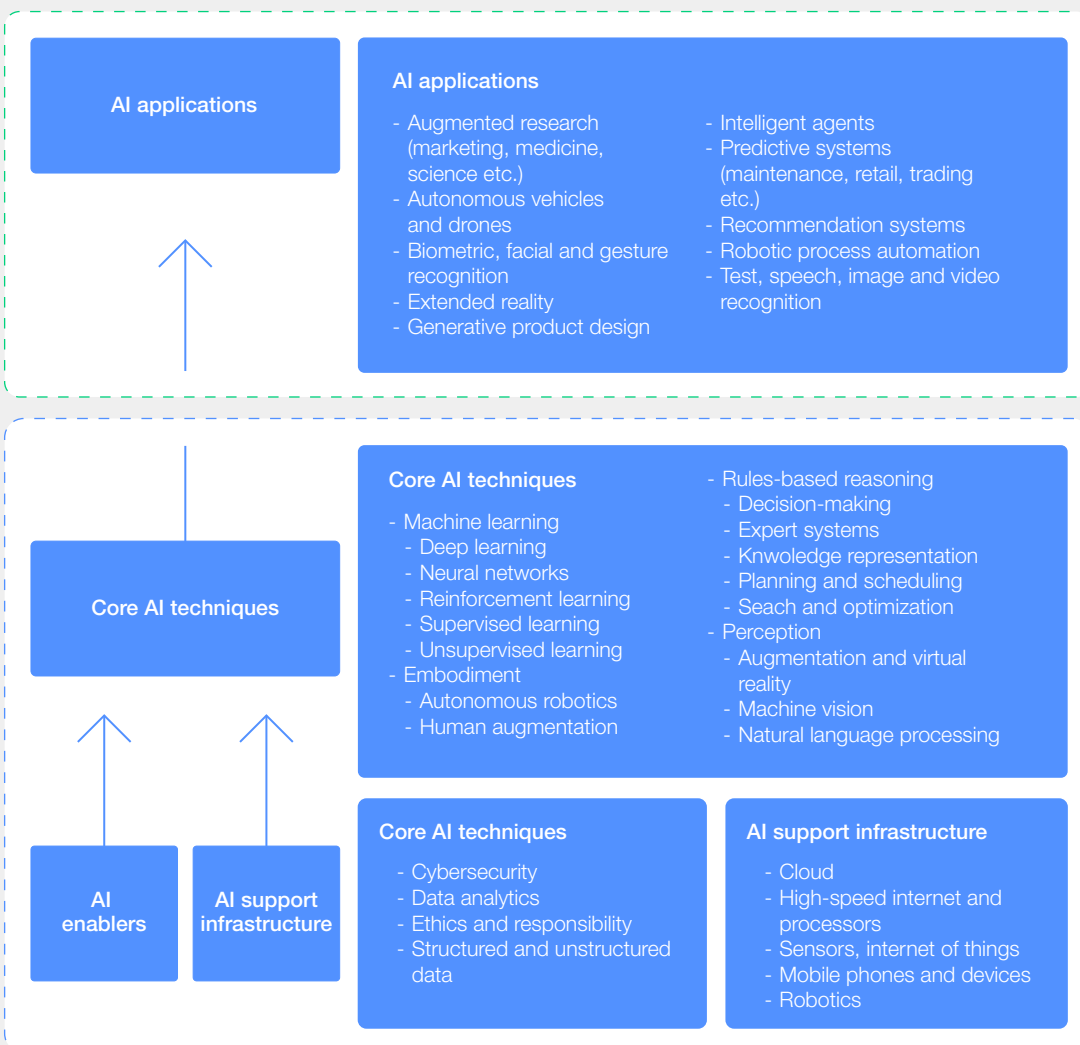
and hosting? What data is needed and how do you collect and cleanse it?

- **Ethics alignment:** Are the AI system and solution provider aligned with organizational values and complying with ethical standards?
- **Risk assessment:** What are the risks? How do you conduct an initial impact assessment to ensure ethical, equitable and sustainable deployment? What are the challenges and successes the industry has experienced?
- **Agile and collaborative AI system integration:** Is a scalable AI system already in place? How can AI applications be integrated into processes so they work effectively for delivery teams?

**Scope of the guidelines**

The scope of this AI procurement guidebook is focused wholly on procuring AI applications.

FIGURE 1 Understanding AI: tools, techniques, enablers



Core AI techniques and models are used to process, solve and learn based on intended application within the organization. Often, core AI techniques are combined with other technologies to drive the desired outcomes.

Core AI techniques are mathematical and statistical models and frameworks that are deployed to process vast amounts of data, make decisions, learn about outcomes, store results and use them as additional data point to improve future decisions.

AI enablers and support infrastructure are the core foundation technologies that an AI ecosystem needs to be successful. Advancements in these technologies improve the overall effectiveness and efficiency of AI solutions.

Source: World Economic Forum, *Empowering AI Leadership*, 2022.

## How the AI guidebook will help

This report is a detailed, step-by-step guide that will help enterprises interested in acquiring AI solutions address each of the key considerations listed earlier. Each section comprises questions that can be used to assess and understand suppliers during the procurement process and will help find the best fit for your organization's requirements. While the toolkit focuses primarily on AI software, it can be tailored and adapted for solutions with AI capabilities. These guidelines will help:

- Provide a holistic assessment framework – by evaluating everything from risk to ethics and biases – to enable responsible acquisition of AI
- Serve as a general, industry-agnostic guidebook for AI acquisition, covering areas such as supplier landscaping, critical stakeholder identification, supplier evaluation framework and supplier selection
- Enable decision-making while balancing business needs with social and ethical responsibility by developing an objective supplier questionnaire-based evaluation
- Provide a framework for collaboration bringing key stakeholders together.

The guidelines are **not** intended to:

- Be a lift-and-shift solution for all industries, but an easily customizable guidebook
- Outline specific regulations or laws to consider, but direct users towards evaluating AI solution providers for appropriate regulations and standards

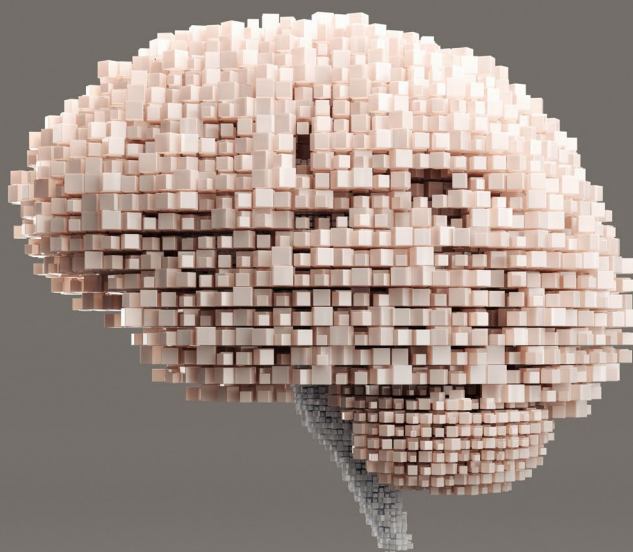
- Define acceptable levels for each of the criteria outlined but capture the relevant criteria for responsible AI acquisition
- Provide a mutually exclusive, completely exhaustive (MECE) supplier questionnaire, but a directionally comprehensive questionnaire to aid decision-making on the procurement of AI solutions
- Identify suitable physical robotic tools and AI hardware systems, but for AI software solutions/applications.

## How the guidelines were developed

This guidebook was designed by the World Economic Forum's Centre for the Fourth Industrial Revolution in association with GEP and in active collaboration with multiple Forum community partners representing both buy and sell sides from industries such as oil and gas, energy, construction and consulting, among others.

It explores and incorporates key considerations and guidelines for responsible AI procurement in commercial organizations, addressing real-world business needs and challenges.

Over one year, the core team organized several workshops with over 25 community partners – representatives from industries and AI solution providers – to coalesce collective knowledge of AI and procurement and design standardized guidelines that can be adopted easily across organizations and industries.



## How to use the guidelines

Before an enterprise invests in AI solutions, it should consider the key principles outlined in this report. These guidelines are meant to be followed only after determining that AI is the best solution for the specific problem. The guidelines shared here are not meant to be a one-size-fits-all solution for any and all challenges that private sector enterprises may face, but by shaping the way new AI solutions are procured, they can improve the overall fit of the AI solution in the organization.

Handling each AI acquisition separately can lead to a lack of alignment with the organization's overall strategy. The evaluation of AI solutions requires inputs from multiple internal stakeholders, each best suited to evaluate the solution on specific parameters. It's crucial to have a unified, collaborative approach in evaluating and selecting the AI solution. Internal separation and lack of communication within an organization can obstruct the effective functioning of artificial intelligence systems. The procurement team (or, at an enterprise level, the procurement leadership

team) for whom these guidelines are primarily designed can serve as the central point to ensure that all stakeholders are involved in a timely and appropriate manner, leading to a cohesive effort in acquiring the solution.

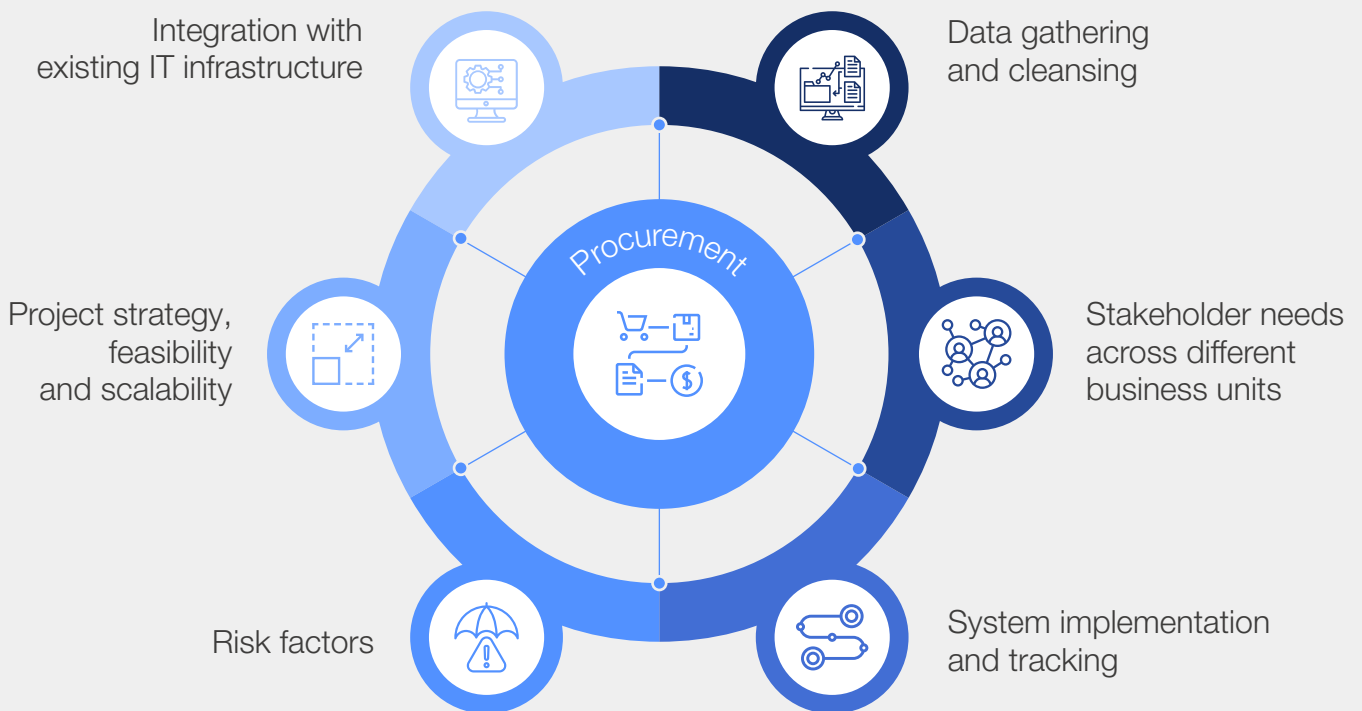
The guidelines in this report are designed to assist stakeholders in advancing their AI goals and to provide direction for the procurement of AI-driven solutions. They will help:

- Business teams to accelerate the achievement of their targets
- Procurement teams to create requests for proposals (RFPs) for AI products and manage the procurement process efficiently
- Data teams and practitioners to safeguard organizational interests and identify and manage potential risks
- AI-solution providers to better understand the core expectations in enterprise AI projects and align their proposals with the emerging standards for AI procurement.

FIGURE 2 Procurement and AI strategy

## Procurement is a key enabler in AI adoption

Procurement is best positioned within an organization to help the C-suite define and create a holistic blueprint for the organization's AI strategy





The following teams, led by procurement, should collaborate to ensure a holistic evaluation of the AI solution under consideration. Within these teams would be data scientists, data architects,

data engineers, legal and risk management professionals, product owners and business analysts, among others.

TABLE 1 Procurement and the need for cross-functional collaboration

Team	Business/end user	IT and cybersecurity	AI centre of excellence/ data team	Data management	Procurement
<b>Role</b>	<ul style="list-style-type: none"> <li>– Assessment and prioritization of use cases</li> <li>– Process definitions</li> <li>– Workflow design</li> <li>– Defining business requirements</li> <li>– Defining expected outcomes</li> <li>– Exception management</li> <li>– Change management</li> </ul>	<ul style="list-style-type: none"> <li>– Architecture and integration design</li> <li>– Infrastructure assessment and design</li> <li>– Security assessment and design</li> <li>– Application management and support</li> <li>– Platform deployment and scalability assessment</li> <li>– Software and licence management</li> </ul>	<ul style="list-style-type: none"> <li>– AI and cognitive capability assessment</li> <li>– Tool adaptability and configuration of needs</li> <li>– Process modelling</li> <li>– Service support capabilities</li> <li>– Testing and debugging</li> <li>– Governance, risk and compliance</li> <li>– User interface (UI)/ user experience (UX) management</li> <li>– Change management</li> <li>– AI ethics and sustainability</li> </ul>	<ul style="list-style-type: none"> <li>– Data needs and consumption requirements</li> <li>– Data governance framework</li> <li>– Data integrity requirements</li> </ul>	<ul style="list-style-type: none"> <li>– Align with the business team on requirements</li> <li>– Collaborate with IT and cybersecurity, AI centre of excellence and data management teams to define the scope of the AI project</li> <li>– Assess the market to identify and shortlist suitable supplier(s)</li> <li>– Coordinate with all teams to enable the implementation of the AI solution</li> <li>– Support the business team to monitor and measure relevant key performance indicators (KPIs)</li> </ul>

The guidelines include five key high-level recommendations, each comprising multiple considerations and text explaining the reasoning and substance behind it. It is important to consider the proportionality of the AI solution being procured – not all guidelines may be relevant to

every procurement decision, and different use cases will determine the importance of each of these considerations. However, following these guidelines will help identify key areas needing further investigation.

### Embedding guidelines in the sourcing process

FIGURE 3 The sourcing process

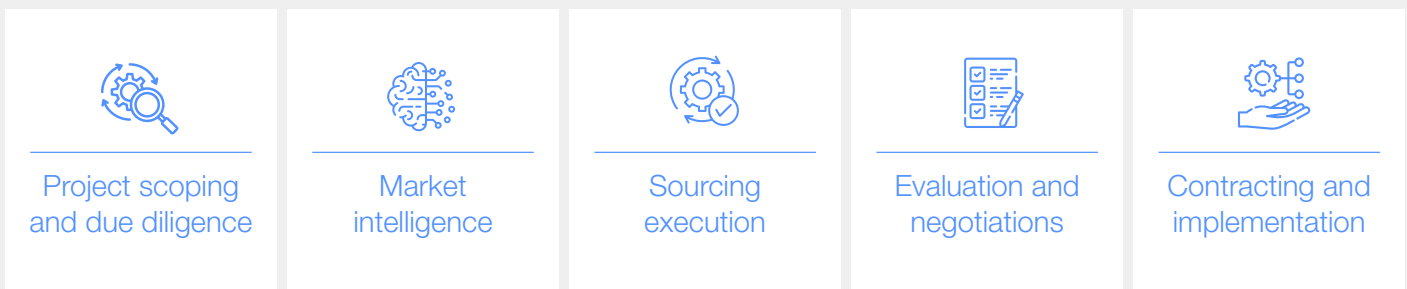


TABLE 2 | How procurement teams can use AI procurement guidelines across typical sourcing processes

Sourcing process	Embedding responsible AI procurement guidelines
<b>Project scoping and due diligence</b>	<ul style="list-style-type: none"> <li>– Prioritize business use case for AI deployment</li> <li>– Define business outcome criteria and objectives</li> <li>– Document as-is processes and current gaps that the AI solution will help solve</li> <li>– Establish business governance prerequisites</li> <li>– Establish risk management requirements</li> </ul>
<b>Market intelligence</b>	<ul style="list-style-type: none"> <li>– Perform high-level market analysis on available AI solutions and solution providers</li> <li>– Understand complexity of data as well as solution specifications and identify various supplier types that could help achieve the business goal</li> <li>– Qualify suppliers that would best fit requirements</li> </ul>
<b>Sourcing execution</b>  <i>*RFx is a term used to describe a range of procurement processes that businesses use to solicit bids from suppliers. RFx can refer to request for information (RFI), request for proposal (RFP), request for quotation (RFQ) or other types of requests for vendor bids.</i>	<ul style="list-style-type: none"> <li>– Draft scope requirements for the identified AI application</li> <li>– Involve internal functions to identify must-have vs good-to-have functionalities and features</li> <li>– Identify what would separate one solution from the other in each of the RFx* questionnaires</li> <li>– Refer sample questions in the guidebook to ensure all focus areas and details are covered</li> <li>– Execute RFx for responses from suppliers</li> <li>– Prepare supplier evaluation matrix based on criteria across areas of consideration</li> </ul>
<b>Supplier evaluation</b>	<ul style="list-style-type: none"> <li>– Perform objective evaluations through supplier scorecard-based questionnaire review</li> <li>– Do total cost of ownership (TCO) analysis</li> <li>– Conduct supplier risk assessment</li> </ul>
<b>Contracting and Implementation</b>	<ul style="list-style-type: none"> <li>– Select suppliers</li> <li>– Contract negotiations: ensure all requirements are met through various terms and conditions</li> <li>– Consider outcome-based commercial model</li> <li>– Draw up a detailed project implementation plan</li> <li>– Create a plan for continuous improvement</li> <li>– Plan for continuous retraining of algorithms</li> <li>– Develop a framework for business governance</li> </ul>

Procurement is well-positioned to weave these facets together and help the C-suite define and create a holistic blueprint for the organization's AI strategy.

# The AI acquisition framework

Assess and benchmark solutions to ensure your organization's AI investment is responsible, ethical and aligned to larger business goals.

The foundation of responsible AI acquisition lies in a holistic framework with ethics and sustainability at the core, driving business goals, commercial objectives and data strategy, all strongly supported by an ongoing governance, compliance and risk strategy. There are underlying interconnections among these elements, nuances that should be factored in during implementation. **The purpose of the developed framework is to ensure that the acquisition of AI systems by commercial enterprises is grounded in ethical principles with strong governance to ensure those principles are applied, thereby mitigating bias and driving resilience.** The AI procurement framework provides comprehensive directional guidelines rather than prescriptive rules, as the degree to which these factors apply to an AI solution or an enterprise can vary significantly. While it is sector agnostic, there could be sector-specific concerns that this framework is not designed to address.

In the subsequent sections, this report discusses in detail the impact of each of the **five pillars of responsible AI acquisition strategy**, highlighting the key considerations and questions that should be raised and addressed internally (within an enterprise) as well as externally (with the supplier partner/solution provider) through the sourcing life cycle and supplier relationship management (SRM).

The report also shares a set of preliminary questions distilled from the comprehensive assessment questionnaire (see Appendix) as a first step for organizations considering an AI solution for the first time.

While procurement can be the orchestrator driving the implementation of this framework, a strong partnership among the concerned functions will determine its success.

FIGURE 4 Key considerations for responsible AI acquisition

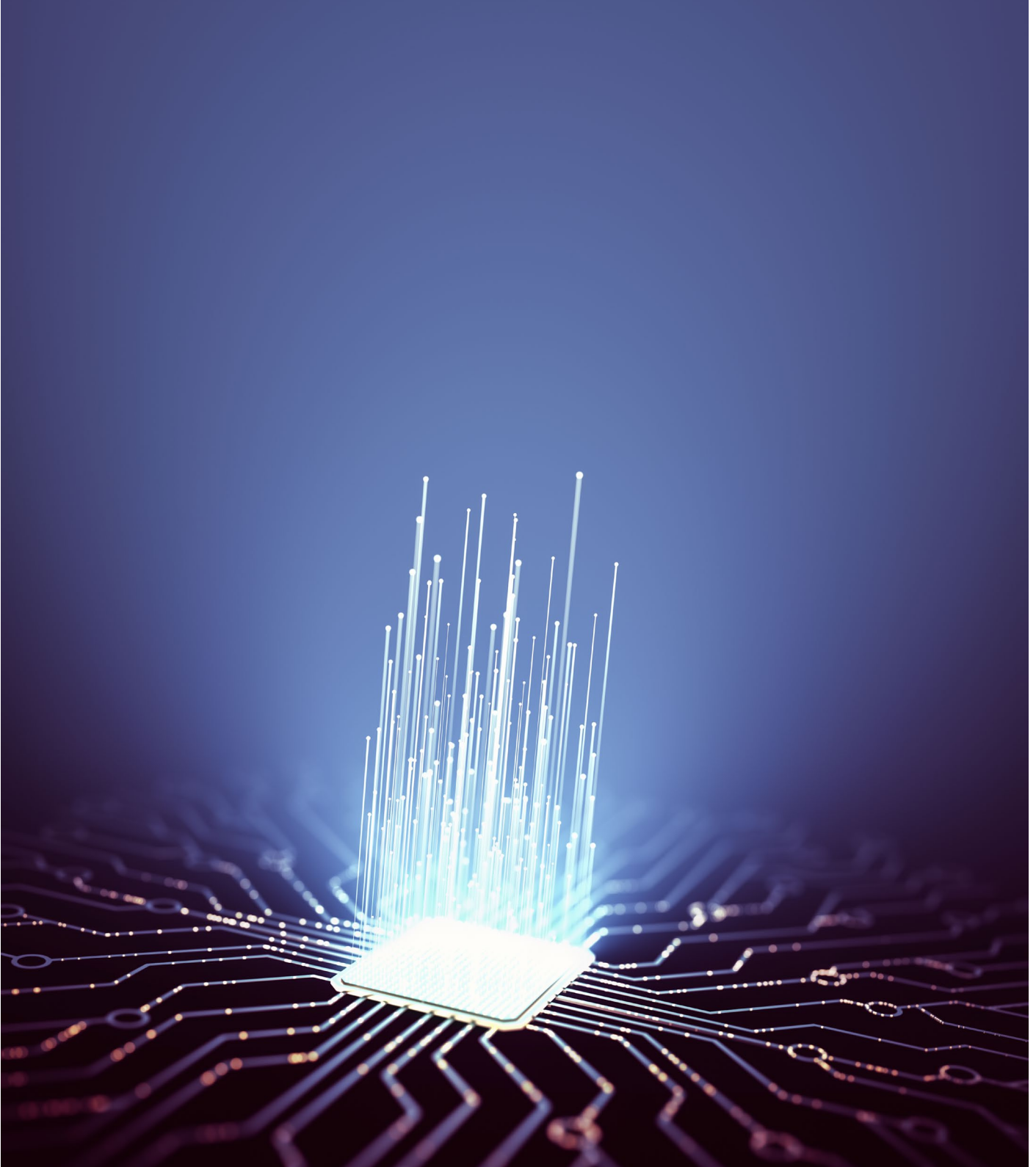


1

# Business strategy



Evaluate ways AI can create a competitive advantage through enhanced business decision-making, leading to positive changes in business outcomes.



As the benefits of AI, from boosting speed and productivity to improving forecasting and decision-making, become more and more visible, its use cases are multiplying. However, prioritization, strategic planning and evaluation will determine the long-term winners in the AI game.

One of the key considerations in procuring an AI solution is to evaluate and determine the strategic fit and capabilities of the solution in terms of the enterprise's current and perceived future needs. Impressed by the inherent capabilities of AI solutions in the market, organizations often try to force-fit the solution to meet their requirements. That is one of the primary reasons AI solutions fail to achieve desired business outcomes.

In order to find the most suitable AI solutions, enterprises must define their desired business goals and link them with the capabilities they want to build.

It's just as important to align the AI solution with the organization's technology and data strategy as AI

will have a broader impact beyond the immediate application area in the long run. **AI centre of excellence/data teams** must be involved right from the start while determining the scope, timeline and potential organizational impact.

**Solution adaptability** should be another key consideration. Over time, an organization's business goals could evolve, or there could be changes in the underlying technology landscape, meaning the solution must adapt to new requirements and continue to achieve the desired outcomes. Additionally, the AI solution should be able to detect and handle gradual and abrupt **concept drifts** and incorporate the required algorithm changes. The solution should also be evaluated for capabilities to scale on demand with minimal complexities.

The solution provider's **thought leadership and vision** in the AI application domain and the underlying core AI techniques can help ascertain the ability to deliver on the organization's desired business goals.

TABLE 3 Achieving business goals: questions to ask

Specifications	Key considerations
<p><b>1.1 How will the AI solution deliver on expected business outcomes?</b></p> <p>Understanding how the solution will help enterprises meet their business goals.</p>	<ul style="list-style-type: none"> <li>– Is the supplier able to understand your business goals and explain how their capabilities will help achieve them?</li> <li>– Are the solution's capabilities outlined clearly, and are there demonstrated use cases they can reference?</li> <li>– How much custom development will be required for the AI solution to meet your requirements?</li> <li>– What level of guarantee does the solution provider give for the process and business outcomes?</li> <li>– Could the solution scale up to meet increased demand/productivity?</li> <li>– If your business slows down, is the solution flexible enough to adjust to the changed needs?</li> </ul>
<p><b>1.2 Is there transparency about what the AI solution can and cannot achieve?</b></p> <p>Often, businesses are not fully aware of the internal working mechanism of the AI model being used. It is the responsibility of the solution provider to educate potential buyers and be transparent about the capabilities and limitations of their offering.</p>	<ul style="list-style-type: none"> <li>– Does the supplier explain the techniques applied in the AI system, including the use of algorithms and associated software libraries for the algorithms?</li> <li>– Is the supplier able to articulate the workings of the solution in an easy-to-understand manner?</li> <li>– Does the supplier dedicate the required resource(s) to train/educate your team about the AI solution?</li> <li>– Does the solution offer explainable results and transparency in the decision-making process?</li> <li>– Does the supplier recognize and describe any limitations of the AI system for the problem you want addressed?</li> </ul>
<p><b>1.3 Can a non-AI solution deliver the same outcomes?</b></p> <p>Like any other technology, AI is not a magic bullet for all problems. It is essential that businesses explore alternative technology/ solutions before deciding on an AI solution.</p>	<ul style="list-style-type: none"> <li>– Can you justify why the use of AI/ML is the optimal approach to meeting the specified business goals?</li> <li>– Can any other cost-effective, non-AI technology or process be used to achieve the expected business outcomes?</li> </ul>

TABLE 3 | Achieving business goals: questions to ask continued

Specifications	Key considerations
<p><b>1.4</b> <b>Is there an inherent feedback loop in the system to adjust to changes in the external environment?</b></p> <p>An AI solution can become a self-learning system, provided a sufficient and appropriate feedback loop is embedded into it.</p>	<ul style="list-style-type: none"> <li>- Does the solution have an automatic feedback/retraining loop, or is there a human in the loop?</li> <li>- How does the solution measure business outcomes and user satisfaction? How do those insights get delivered and/or feed into any product changes or updates?</li> </ul>
<p><b>1.5</b> <b>How effectively can the solution be updated to accommodate change in requirements?</b></p> <p>AI is a highly dynamic system, so the supplier should partner with the buyer to redesign the solution in case business requirements change. This would be applicable especially if data complexity is high.</p> <p><i>*A steady state is when the system is acting in the intended manner, and all high-severity incidents are resolved</i></p>	<ul style="list-style-type: none"> <li>- How easy is it to adapt or customize the solution during the initial and steady state? Does the solution update its behaviour based on newly ingested data?</li> <li>- How will the supplier help in course correction if the AI model or prediction delivers unexpected results?</li> <li>- How is the service tested and monitored for model or performance drift over time?</li> <li>- Does the supplier provide KPIs for monitoring any performance drifts that may prompt retraining of the model (if there are unexpected changes)?</li> <li>- Does the supplier provide documentation detailing how the AI system can be reconfigured or adapted if the results are not delivering the goals?</li> </ul>
<p><b>1.6</b> <b>Is the supplier a thought leader in this domain?</b></p> <p>All new technologies require partnerships with suppliers that are thought leaders in this domain as their vision will steer the solution to meet future requirements.</p>	<ul style="list-style-type: none"> <li>- How much does the supplier invest in R&amp;D in the domain of their solution and company requirement?</li> <li>- How does the supplier product development stay in line with market trends?</li> <li>- Does the supplier publish reports offering industry best practices and actionable insights in terms of optimizing AI outcomes?</li> <li>- Does the supplier organize in-person/virtual networking events for its clients to increase awareness of existing AI solutions?</li> <li>- How does the supplier solution differentiate itself from its competitors?</li> <li>- Is the supplier investing in upskilling and training its talent pool to stay relevant with state-of-the-art technology?</li> </ul>

2

# Commercial strategy



How does the AI solution align with the broader commercial strategy?



“ An effective AI system will deliver invaluable outputs to any business. However, as with all new technology, the learning curve and the unknowns carry unforeseen risks.

Business strategy defines how organizations want to achieve their business objectives and is complemented by an accompanying commercial strategy that defines how much an organization would be willing to spend to achieve those goals.

Generating commercial benefits for the enterprise is one of procurement’s key goals. In this case, it means identifying the most suitable AI solution with the most favourable commercial terms. These terms include cost, duration, payment terms, invoicing plan, discounts, rebates and investment risk, among others. However, commercial strategy should not be viewed solely through the lens of monetary returns; rather, it should **focus on the value delivered** for the money invested.

As for all investments, procurement should ensure that the purchased AI solution can deliver on the organization’s ROI expectations. ROI should include the overall value and potential benefits generated for the organization. Choosing and defining the most suitable KPIs – while challenging for new technologies with many unknowns – is crucial for continually monitoring whether the investment is yielding value at all stages.

The commercial considerations for an AI solution should be approached with slight variations compared to investing in other technology solutions. The **timeframe for TCO** is usually three to seven years for a non-AI solution. However, AI is typically deployed for a longer term, so the cost considerations should include a much longer timeframe. Also, the **ongoing cost of retraining and managing concept drifts** will need to be considered while calculating the TCO.

When it comes to new technologies, it is important to **manage uncertainties of business outcomes**. An effective AI system will deliver invaluable outputs to any business. However, as with all new technology, the learning curve and the unknowns carry unforeseen risks. This makes it imperative to have strong governance in place to protect investment. Supplier risk assessment, performance management and appropriate risk mitigation plans with linked financial compensations are a few factors to consider. Organizations should look to include outcome-based pricing models to drive joint accountability and mitigate their investment risk.





TABLE 4 | Meeting commercial targets: questions to ask

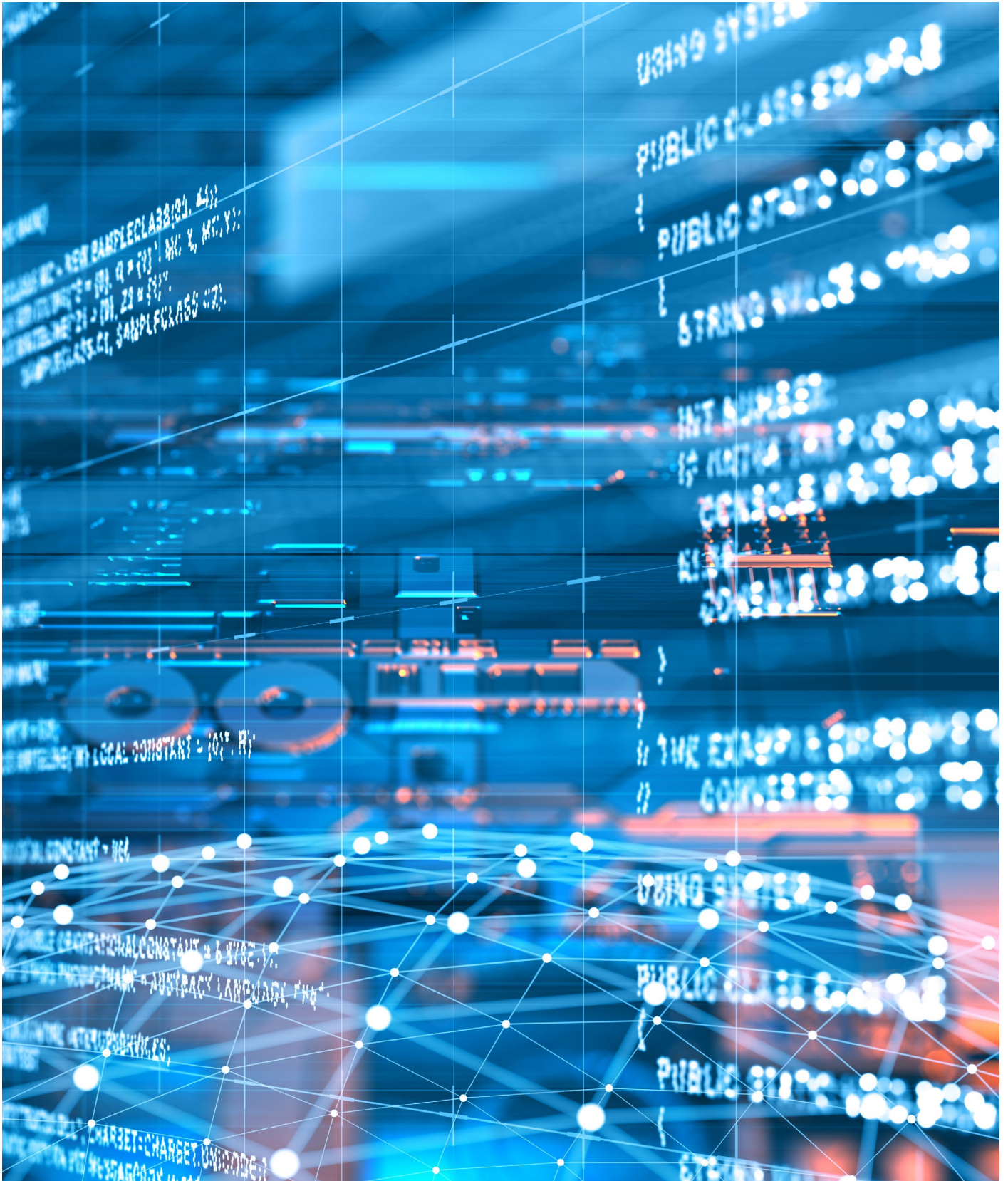
Specifications	Key considerations
<p><b>2.1 What is the expected value of the solution to be delivered?</b></p> <p>Commitment to business case requirements will be a key ingredient in a supplier partnership.</p>	<ul style="list-style-type: none"> <li>- In what ways is the supplier committed to achieving the business case objectives?</li> <li>- Are there any dependencies/assumptions made by the supplier on achieving these objectives?</li> <li>- Are there ways in which the value delivered is optimized during the steady state**?</li> <li>- Will the solution require any co-development/co-innovation? How will you benefit from the potential gains of the supplier in case of co-innovation?</li> </ul>
<p><b>2.2 Do you understand all the costs involved in the purchase and maintenance of the AI system?</b></p> <p>Determining the viability of an AI solution for a longer or shorter term can be done by calculating the TCO, which includes all direct and indirect costs throughout the lifetime of the solution – from acquiring, building, running to retiring.</p> <p><i>*Much of the cost of AI projects is internal; the process of getting data ready to enable an AI solution is time-consuming and expensive.</i></p>	<ul style="list-style-type: none"> <li>- Can the supplier provide a breakdown of one-time costs based on project milestones/measurable deliverables?</li> <li>- Has the supplier provided a resource-wise effort estimation required for each of these milestones?</li> <li>- Are the recurring cost components clearly defined? Is there clarity on the frequency of the recurring costs?</li> <li>- What would be the cost of changes required in the existing systems/infrastructure?*</li> <li>- Has the supplier provided the hourly/daily rates of consulting/technical resources to be involved in the project?</li> <li>- What are the relevant skills/years of experience in the AI domain of the resources the supplier plans to deploy?</li> <li>- Does the supplier offer different pricing options to accommodate the gradual expansion of the AI system deployment in the client environment?</li> <li>- What are the discounts/rebates offered by the supplier?</li> </ul>
<p><b>2.3 How can organizations mitigate the investment risks of the solution?</b></p> <p>There are multiple unknowns when organizations invest in new technologies and the team should evaluate possibilities to mitigate investment risks.</p>	<ul style="list-style-type: none"> <li>- Is the supplier able to delink the discovery and execution phases to restrict upfront investment while the business case is being tested?</li> <li>- Can the solution/implementation be in phases and gradually widened to avoid large upfront costs? For e.g. implementation of a low-cost model or proof of concept before full-scale implementation?</li> <li>- Is the supplier able to commit to an outcome-based pricing model? What would be the KPIs that can be linked to outcomes?</li> <li>- Is the supplier financially solvent?</li> <li>- Is the supplier currently going through or has planned for an acquisition/merger?</li> <li>- Who will own the AI model in the event of insolvency or ownership transfer? (e.g. code escrow, data escrow, model escrow)</li> </ul>

3

# Data strategy



Evaluate the effectiveness of the AI solution in terms of analysing valuable data in support of enterprise objectives.



Analysing data and learning from it is the fundamental job of any AI solution, so providing relevant data is an important first step. A robust data strategy serves as the foundation for any successful AI deployment.

Organizations will have to **prepare the input dataset** for the AI solution, and the costs associated with this will be different. For instance, the cost will be higher for those with data swamps rather than data lakes.<sup>2</sup>

Next comes the question of **data relevance**. Even if the data is available, is it the right data? Will it be sufficient to generate an exhaustive list of use cases for the purpose and scope of the AI solution? How can this data be accessed? The project business and central data management teams will have to work jointly to arrive at these answers. If the internal data available is insufficient for training, and the data acquisition costs are high, then generating synthetic data from the available internal dataset or going to

the market for synthetic data sources may be the next best approach.<sup>3</sup>

In parallel, organizations should start thinking about their **future data strategy** as they will have to manage the evolving requirements that arise from AI implementation. They should explore potentially suitable data platform(s), build a scalable data pipeline, establish a centralized data governance mechanism to act as a support function and enable smaller teams to execute a top-down data strategy, devising policies and procedures for effective data management and adherence to legal and regulatory requirements.

Organizations can also consider making use of business opportunities from the data they collect. How can additional benefits be derived from data being traded back to the market/ecosystem in terms of negotiating better contract terms with AI suppliers or generating additional revenue streams?

TABLE 5 Driving data for success: questions to ask

Specifications	Key considerations
<p><b>3.1 Do you have a clear and defined as-is and to-be data strategy?</b></p> <p>To maximize business value from implementation of the AI solution, organizations need to assess, identify gaps and adopt a long-term data strategy.</p>	<ul style="list-style-type: none"> <li>– What type of data platform does your organization currently have in place? How will the new AI implementation impact your existing data platform?</li> <li>– What is the enterprise data structure strategy if you are planning to migrate to the cloud and use cloud-based AI capabilities? What data will go on the cloud? Are you looking at single or multi-cloud providers? Do you want to prioritize modularity or flexibility?</li> <li>– Is there an existing data culture across the organization?</li> <li>– Is senior leadership involved in establishing and communicating data strategies?</li> <li>– How are different parts of the organization incentivized to share and reuse data? Are employees being trained in data quality management?</li> <li>– Does the data-based feedback need to be looped back into business decisions and how?</li> <li>– Is there a designated team for data collection, validation, storage, governance, security and accountability structures across the entire data supply chain?</li> <li>– Who is responsible for ethical data use in the enterprise?</li> </ul>
<p><b>3.2 What are the different sources of data to be considered?</b></p> <p>For organization-specific contextual learning process, internally available data is ideal. Otherwise, external sources of data (synthetic data) can be considered.</p>	<ul style="list-style-type: none"> <li>– What are the different kinds of data expected to be ingested by the AI solution?</li> <li>– Can the AI solution meet existing and new enterprise objectives based on internally available data?</li> <li>– Do you know where and how to collect the data internally? Is the available internal data ready to be consumed – is it accurate, complete, consistent and up to date?</li> <li>– Will external sources of data be needed? What is the cost of acquiring/generating synthetic data?</li> <li>– Can the external data provider ensure complete, relevant, unbiased and timely data? Who is responsible for ensuring the quality, usability and reliability of third-party data?</li> <li>– Should there be different contractual provisions for the exchange of different categories of internal data and related data models outside your organization? For example, you may want to limit/encrypt sharing of data/data models built on personal identifiable information (PII)-related data.</li> <li>– Is the collection of additional data necessary in the future for optimal AI performance?</li> </ul>
<p><b>3.3 Does the supplier have satisfactory data management practices?</b></p> <p>The data for the AI model should meet data quality standards defined by the governance team. Furthermore, data ownership and management, right from storage to extraction, need to be efficient, secure and adhere to regulatory requirements.</p>	<ul style="list-style-type: none"> <li>– Does the supplier have adequate data quality assurance processes and frameworks around storage, management and transfer of data?</li> <li>– Who will have the ownership and be accountable for the data and derivative models?</li> <li>– Does the supplier have the standard data privacy/security frameworks for its industry?</li> <li>– How will the supplier follow data privacy practices for sensitive data that falls outside of the General Data Protection Regulation (GDPR)?</li> <li>– Where is the data collected for the AI model stored? What are the security measures to prevent a data breach?</li> <li>– Who has access to the stored data? Elaborate on the liability in case of data breach.</li> </ul>



# Ethics and sustainability

Evaluate if the AI solution creates a net positive impact from an ethical and sustainability perspective.










A responsible AI system upholds ethical standards of fairness, transparency, inclusivity and accountability while being environmentally sustainable and balancing profit with social responsibility.

The best way to ensure that your organization invests in a responsible AI solution is by having dedicated internal stakeholders take **responsibility** and **accountability** for various facets of the AI implementation process. For instance, the chief analytics officer or chief data officer could oversee data governance, providing AI-focused training to staff and collaborating closely with third-party providers of data, AI services and software. A dedicated team or function could oversee project direction and change management; another team could oversee the execution, solution adoption and performance tracking.

However, certain pitfalls (such as bias and coding of unethical standards into the system) can corrupt the AI solution. Designers could unknowingly introduce bias into the model, or biases may enter the system through a training data set or during training interaction with end users. Hence, **eliminating bias** should be one of the top priorities during the selection and deployment of an AI system. The solution provider should have sufficient checks and balances within the system to eliminate or minimize potential biases and ethical issues from the outcomes. It's also important for the supplier's development team to be aware and consciously adopt an **ethical mindset** while designing and building the system. An ideal partner will have a mitigation plan in case the AI solution starts producing biased outcomes. Conversely, these biased outcomes can be pre-empted if the supplier prioritizes **diversity** and **inclusivity** within the team from the initial stages.

TABLE 6 Seven core values for ethical AI

 <p><b>Common good:</b> The purpose of AI solutions should be to accelerate the development of society and improve quality of life of all people.</p>	 <p><b>Accountability:</b> All stakeholders involved in the development and deployment of the AI solution should be compliant with standards and legislations, and accountable for the outcomes and impacts of the solution.</p>	 <p><b>Non-maleficence:</b> All stakeholders should ensure that AI does not put humans at risk of harm, either in the intended or unintended outcomes of its use, and that it is not used for nefarious purposes.</p>
 <p><b>Transparency:</b> The decision-making process of the AI algorithm should be easily explainable, and developers should be transparent about its purpose and intentions to promote fairness and equity.</p>	 <p><b>Inclusiveness:</b> Ensuring that the members of AI design teams themselves are diverse and inclusive will help proactively address biases as well as increase the trust external stakeholders place in the solution provider.</p>	 <p><b>Accessibility:</b> AI technology and the knowledge on its development, deployment and use should be made widely accessible so that individuals can develop the ability to use AI technology and understand the potential it brings.</p>
 <p><b>Equitability:</b> AI solution designers should keep in mind equitable outcomes for all – from vulnerable communities to people with disabilities.</p>		

**Sources:** World Economic Forum, *Quantum Computing Governance Principles*, 2022; World Economic Forum, *A Blueprint for Equity and Inclusion in Artificial Intelligence*, 2022.

“ Companies should have a vetting process as part of their AI system's pre-implementation review to ensure ethical and sustainable considerations have been addressed.

Emerging ethical risks such as misinformation (e.g. deepfakes), over-reliance and loss of skills, which already exist in some sectors today, could now affect many services in the supply chain because of the extensive use of AI. For example, AI-powered chatbots in customer service can lead to over-reliance on AI, no human involvement and a lack of empathy in the redressal of complaints, which can reduce customer satisfaction. Mitigation measures for such risks need to be addressed with suppliers during due diligence and should be embedded in commercial clauses.

**Sustainability metrics** are just as important when evaluating an AI solution. In its current form, AI is not a sustainable solution. Sustainability in AI would mean developing AI systems that are compatible with sustaining environmental resources for the present and future generations. A responsible AI

provider should have a clear road map to mitigate the environmental impact (such as a high level of energy consumption and resource depletion) caused by the technology.

Enterprises – the buyers of AI solutions – must also have processes in place to encourage the adoption of a responsible AI solution. Employees within the buyer organizations must have the right incentives and be recognized for doing the right (sustainable) thing. Companies should have a vetting process as part of their AI system's pre-implementation review to ensure that ethical and sustainable considerations have been addressed. Also, an organizational framework should be developed that maps the roles and responsibilities of each team involved and an escalation procedure in case of questionable actions.



TABLE 7 | Building an ethical and sustainable future: questions to ask

Specifications	Key considerations
<p><b>4.1 Describe the approach to eliminate or minimize bias and ethical prejudices from the AI solution.</b></p> <p>Understanding how the supplier and the solution will mitigate any potential bias in the outcomes.</p> <p><i>* Equalized odds and disparate impact are metrics used to measure fairness in ML algorithms</i></p> <p><i>** Zip code or postal code is a common proxy variable for socioeconomic status, which can introduce biases in the prediction of certain outcomes</i></p> <p><i>*** Consequences scanning is a process that deliberately inserts friction into the product development process with the goal of identifying and mitigating negative or unintended consequences</i></p>	<ul style="list-style-type: none"> <li>- What methods are used to train the AI model? Do the training methods introduce fairness (eliminating biases like gender, age, ethnicity, region), interpretability, privacy and security into the model?</li> <li>- What data is the supplier using to train the AI solution? Where is the data being sourced from and are there multiple data sources? Has the supplier trained the model on representative and complete data sets? How can you test for bias in training data?</li> <li>- Does the model come with a set of model cards clearly describing the nature of the model and its training data?</li> <li>- Does the supplier use any open-source ethical tooling to assess the bias factor?</li> <li>- Can the supplier identify possible sources of bias or unfairness and where they come from – whether it's data or techniques implemented or other sources?</li> <li>- Is a conscious effort being made to implement checks and balances in the AI to prevent biases from creeping in?</li> <li>- Does the supplier use any metrics (e.g. equalized odds or disparate impact*) to evaluate bias in AI?</li> <li>- Has the supplier monitored for any proxy variables that could lead to biased predictions? (e.g. postal code data**)</li> <li>- Has the supplier published any white papers or technical reviews to evidence the technical robustness and unbiased outcomes of its model's predictions?</li> <li>- Does the supplier use any design ethics techniques? (e.g. consequences scanning***)</li> <li>- Would the supplier be willing to participate in these exercises/procedures hosted by you?</li> <li>- Does your solution address new ethical risks such as misinformation, over-reliance and loss of skills?</li> </ul>
<p><b>4.2 Describe the process for ensuring that the solution development team adopts an ethical mindset.</b></p> <p>The development team must be aware and responsible while designing ethical standards for their AI solution.</p>	<ul style="list-style-type: none"> <li>- Does the AI and ML team take responsibility for how their work will be used?</li> <li>- What are the ethical standards encoded into the AI solution?</li> <li>- Does the supplier offer training or have an awareness programme to ensure its team understands the potential impact of creating an AI system that produces an incorrect or disproportional output? If not, would the supplier be open to AI ethics training offered by your organization?</li> <li>- Have there been any instances in the past when the AI has not met performance requirements and delivered unintended results? What were the corrective measures taken for better outcomes?</li> <li>- Is there any redressal mechanism if individuals are affected negatively?</li> <li>- Does the supplier consider user accessibility needs during design thinking? For example, many facial recognition technology (FRT) cameras are ineffective for individuals using wheelchairs as they cannot be lowered to an appropriate height.</li> </ul>

TABLE 7 | Building an ethical and sustainable future: questions to ask continued

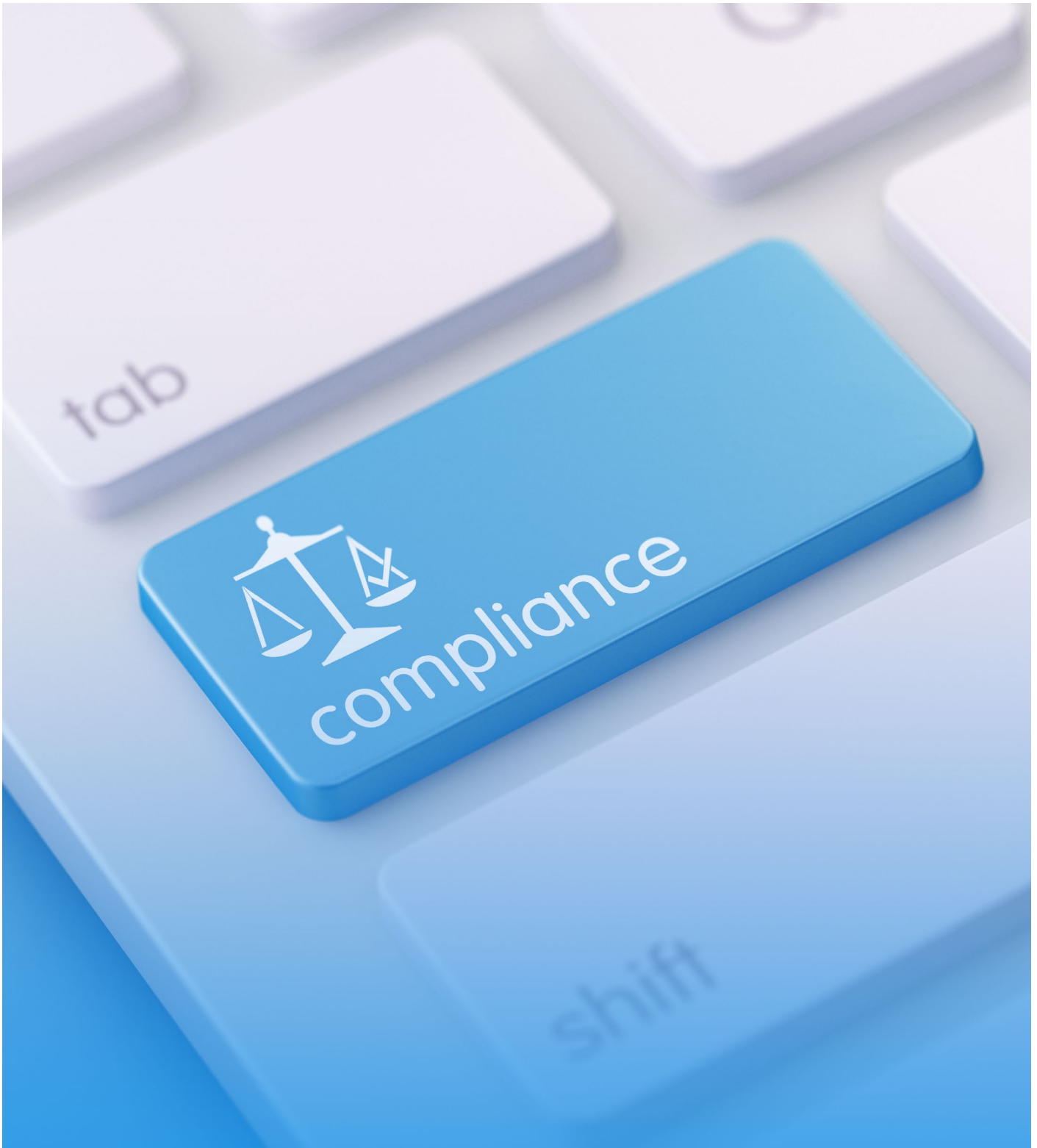
Specifications	Key considerations
<p><b>4.3 How is the supplier's approach toward ethics at an organizational level?</b></p> <p>Diving deeper to understand how the supplier organization looks at ethics and sustainability.</p>	<ul style="list-style-type: none"> <li>- Does the supplier's code of conduct (or equivalent) specifically highlight the ethical use of digital technology, including AI ethics?</li> <li>- Does the supplier employ a chief AI ethics officer? What is their expertise and experience in this space?</li> <li>- Has the supplier's senior leadership endorsed AI ethics? Are there public statements or other evidence to demonstrate the supplier's engagement with ethics?</li> <li>- Does the supplier have an AI ethics ambassador network?</li> <li>- Did diverse teams build the AI system? Does the supplier have a policy on inclusivity or diversity, equity and inclusion goals?</li> <li>- Does the supplier use an AI ethics impact assessment? If not, can they provide relevant information so your organization can complete its assessment?</li> <li>- Does the supplier have an AI ethics board? Does it have the enforcement power to prevent the engineering of AI systems that are inconsistent with its organizational values?</li> <li>- Does the supplier have a whistle-blower protection policy?</li> <li>- Does the supplier work with law enforcement and/or military agencies? What type of AI is being supplied to these organizations? For instance, providing a biased facial recognition system for policing can create problems.</li> <li>- Does the supplier provide responsible use guidelines? Does the supplier have a glossary of terms for ethics?</li> </ul>
<p><b>4.4 Is the supplier concerned about the environmental impact caused by its AI solutions? What steps are being taken to mitigate the impact?</b></p> <p>Evaluate whether the solution provider has a clear road map in place to mitigate the environmental impact caused by the AI technology.</p>	<ul style="list-style-type: none"> <li>- What is the supplier's monthly (average) energy consumption (kWh)?</li> <li>- How much energy (kWh) is spent every month by the supplier for training its AI solutions?</li> <li>- What are the measures or techniques the supplier has adopted to optimize its overall energy consumption?</li> <li>- Does the supplier have a road map to become energy efficient in the next three to five years?</li> <li>- What are the hardware systems the supplier uses to power its AI solution? Is the hardware infrastructure optimized to reduce energy consumption?</li> <li>- Does the supplier use renewable energy sources to meet its energy requirement for training the AI solution? If yes, what's the breakup of the percentage of energy derived from different energy sources?</li> <li>- Has the supplier considered possible environmental harm during data collection? For example, collection and processing of large amounts of data can require significant amounts of energy, particularly if the data is stored in data centres or on cloud servers.</li> </ul>

5



## Governance, risk and compliance

Build and integrate risk management plans with the AI solution and improve business resilience, especially to AI-related cyber risks.





While AI can deliver an incredible increase in benefits, the consequence of its errors can be just as huge. Every industry faces a different kind of risk based on target data collection points, regions, data safety and legal compliance, among other things.

**Data sourcing** is one of the key focus areas to manage the risk associated with deploying an AI solution. Today, enterprises have a vast volume of data to exploit, but this comes with issues such as data privacy and geopolitical and cybersecurity risks. Data breaches can destroy business reputation, lead to legal actions and result in huge loss of revenue. The average cost of a data breach in the US has almost doubled over the last 10 years jumping from \$5.4 million in 2013 to \$9.4 million in 2022.<sup>4</sup> Another damaging risk related to data is **bias in algorithms**. The AI model learns from the dataset it is trained on, and bias in the dataset can result in undesirable outputs.

**Cyberattacks** are another significant risk. These have the potential to impact the integrity of the AI model's decisions and predictions; hackers can take control of the solution or deliver manipulated and/or malicious inputs that result in the **poisoning of the AI algorithm**.

Used incorrectly or negligently, AI can leave an organization exposed to operational, financial, regulatory and reputational hazards. Safeguards must be put in place to ensure that the AI solution functions as intended, and this calls for a strong

governance system designed with AI's unique characteristics and capabilities in mind.

**AI governance** is the process of setting policies and establishing accountability to drive the development and deployment of AI systems in an organization. It's a broad framework that uses a variety of processes, approaches and tools to ensure that an organization uses AI technology favourably and responsibly. AI governance encompasses risk management, regularity compliance, contractual agreements and ethics. When done properly, AI governance fosters agility and trust in an organization.

Capturing and managing metadata on AI models creates transparency into how AI systems are built and deployed, which is a critical prerequisite for most regulatory concerns. Many tools and calibrated assessments are available in the market that can help assess the impact of an AI system, areas of risk and performance. Many of these tools have been developed with academia and governments to encourage transparency in model reporting and drive assurance that the AI systems are aligned with existing and emerging regulations and standards.

These assessment tools can help enterprises create consistent and well-defined practices that prioritize attributes such as accuracy, bias, consistency, transparency, interpretability and fairness in the AI model being developed.

TABLE 8 Managing governance, risk and compliance: questions to ask

Specifications	Key considerations
<p><b>5.1 What is the target demographic for data collection for the model?</b></p> <p>As AI modelling depends on data, it is imperative to consider the impact of data use on the target, especially in terms of privacy, consent and regulations related to individuals.</p>	<ul style="list-style-type: none"> <li>– Is the data being collected from vulnerable demographic groups of the target countries?</li> <li>– If personal data is being used, is it being collected in compliance with the data protection and privacy laws of the country (GDPR, Health Insurance Portability and Accountability Act (HIPAA), regional laws etc.)?</li> <li>– Does the supplier have the informed consent of the individuals whose data has been collected, i.e. have the individuals been provided all the necessary information?</li> <li>– Can individuals withdraw their consent to the data collected? If so, will the collected data be withdrawn from the AI model?</li> <li>– What are the relevant PII categories for the data collection process?</li> <li>– Is the content moderated? (e.g. for sexuality/violence)</li> </ul>
<p><b>5.2 How has the supplier accounted for managing cybersecurity risks?</b></p> <p>An important concern to be addressed early on is cybersecurity failures, given its potential to have a serious impact on the output of the AI solution.</p>	<ul style="list-style-type: none"> <li>– What are the proactive measures the supplier has taken to detect and tackle cyberattacks?</li> <li>– How does the supplier minimize the effect of an attack?</li> <li>– Does the supplier actively perform vulnerability management to address common and frequent threats?</li> </ul>

TABLE 8 | Managing governance, risk and compliance: questions to ask continued

Specifications	Key considerations
<p><b>5.3 Has the supplier reviewed the potential geopolitical risks that arise from operating in different physical locations?</b></p> <p>For a company looking to embed a disruptive technology like AI into its systems, the impact of geopolitics must be considered.</p>	<ul style="list-style-type: none"> <li>– Has the supplier accounted for the geopolitical risks associated with collecting data from certain disputed territories?</li> <li>– Have the risks of storing or processing data in unstable regions been considered?</li> <li>– Will AI pose any risk if used in such territories? e.g. can it heighten instability in regional politics, affect peace and security?</li> <li>– Are data collectors at any physical risk during the process of data collection?</li> </ul>
<p><b>5.4 Have the risks related to the project been defined clearly?</b></p> <p>Due to the uncertainty of AI/ML work, an experienced AI modelling supplier is expected to identify possible risks and ways to mitigate them.</p>	<ul style="list-style-type: none"> <li>– Is the scope for the AI defined clearly in terms of deliverables/outcomes to be achieved?</li> <li>– How does the supplier manage unsupported content types?</li> <li>– How does the supplier define hard performance metrics with AI?</li> <li>– To what extent is the AI solution reproducible?</li> <li>– Will the AI model be covered by intellectual property policy? Who has legal ownership of source data, models and resell rights?</li> </ul>
<p><b>5.5 Is the supplier compliant with rules and regulations associated with building an AI model?</b></p> <p>AI offers great value to businesses, but it comes with a strategic risk for all stakeholders. Governments and institutions are actively taking measures to prevent the misuse of the technology and to build trust in AI tools.</p> <p><i>* The AI explainability statement is a public document released by an AI organization that outlines how its AI algorithms work, its intended use, technology infrastructure, model accuracy, bias detection and mitigation, system maintenance, risk management, ethical principles, and data sources.</i></p> <p><i>** The EU AI Act establishes a horizontal set of rules for developing and using AI-driven products, services and systems within the EU using a risk-based approach of evaluating each AI system. The NYC Law on Automated Employment Decision Tools states that an automated hiring system used on or after 1 January 2023 must undergo a bias audit consisting of evaluation by an independent auditor, including testing to assess disparate impact to certain groups.</i></p>	<ul style="list-style-type: none"> <li>– Has the supplier proactively prepared to ensure compliance with regulations? Does the supplier provide an explainability statement* outlining the critical dimensions of the AI solution?</li> <li>– Does the supplier comply with data-related regulations such as General Data Protection Regulation (GDPR), California Consumer Privacy Act (CCPA), Health Insurance Portability and Accountability Act (HIPAA), Children’s Online Privacy Protection Act (COPPA) to name a few?</li> <li>– Is the model compatible with emerging algorithmic compliance regulations, e.g. the EU AI Act<sup>5</sup> and the NYC Law on Automated Employment Decision Tools<sup>6</sup> (effective July 5, 2023)**?</li> </ul>
<p><b>5.6 How does the supplier prepare for audits and compliance requirements?</b></p> <p>A risk management process that captures the policies, processes, procedures and practices across the organization involved in the development, testing, deployment, use and auditing of AI systems should be in place. It must be implemented effectively as well as be transparent.</p>	<ul style="list-style-type: none"> <li>– Does the supplier conduct mandatory conformity assessments? At what frequency?</li> <li>– Has the supplier clearly defined the systems in place for internal audits? What are the audit artifacts that it can share with you?</li> <li>– How does the supplier ensure that compliance is met on its side as well as the buyer’s side after implementation of the AI model?</li> <li>– If access to legal support is limited (in case of a smaller buyer), how can the supplier assist you in ensuring compliance?</li> <li>– Has the AI model been assessed for its performance with algorithm assessment tools, model cards etc., to prevent biases and undesirable outputs?</li> </ul>
<p><b>5.7 Is the supplier implementing international standards and certifications in the model?</b></p> <p>Standards and certifications can form a part of the initial guiding principles of governance to help AI developers and its users in their journey to build a responsible AI model.</p>	<ul style="list-style-type: none"> <li>– Does the supplier follow any AI governance standards set by international standard bodies (such as the International Organization for Standardization (ISO) and the Institute of Electrical and Electronics Engineers Standards Association (IEEE) and others) to ensure that best practices are being followed?</li> <li>– Will the AI system be accredited by any recognized institute that provides a calibrated conformity assessment of the model?</li> </ul>

TABLE 8 | Managing governance, risk and compliance: questions to ask continued

Specifications	Key considerations
<p><b>5.8 What are the organizational practices recommended by the supplier?</b></p> <p>Organizations should establish practices that can characterize the AI model specifications paying special attention to attributes such as accuracy, bias, consistency, transparency, interpretability and fairness.</p>	<ul style="list-style-type: none"> <li>- Is the risk-based approach developed by the supplier based on the AI model and the industry in which it is being implemented?</li> <li>- Has the supplier conducted an AI impact assessment of the buyer organization at an early stage of the procurement process?</li> </ul>
<p><b>5.9 Do the contractual agreements include all compliance-related factors?</b></p> <p>A good agreement will not only involve basic contractual terms and project management details but also have protective measures against non-compliance.</p> <p><i>* RAI is a non-profit organization offering certification programmes that align with AI laws, regulations, principles, research and practitioner insights.</i></p>	<ul style="list-style-type: none"> <li>- Can the supplier develop capacity in the form of new contract requirements?</li> <li>- Is there a supplier compliance statement (e.g. Responsible Artificial Intelligence Institute (RAII) certification*) that organizations can include in their master service agreements?</li> <li>- Are there contractual agreements surrounding restricted use or prohibited forms of use?</li> <li>- Has the buyer developed well-defined KPIs and compliance metrics to track performance during the AI life cycle?</li> <li>- Does the supplier offer support beyond contractual agreements to assist in governance, maintenance and change management?</li> </ul>



# Conclusion

The history of AI in enterprises dates back to the early days of computing when rule-based systems and expert systems were used to perform specific tasks, such as analysing data and making predictions. However, these systems were limited in their capabilities and required significant amounts of human input to function effectively.

The growth of AI has been exponential in the past decade, and AI technology is now achieving goals that seemed very distant just a few years ago. Organizations worldwide are increasingly adopting AI and ML to support business growth, improve efficiency and gain a competitive edge. Businesses are investing in AI-powered systems to automate repetitive and time-consuming tasks, optimize pricing, identify new opportunities and make investment decisions. In many cases, these AI solutions are deeply embedded into the organization's enterprise applications, making recommendations and predictions and influencing critical decision-making.

That said, it's crucial to approach the procurement process in a comprehensive and collaborative manner. The procurement team needs to maintain a high degree of control to ensure that the AI tool delivers ethical, responsible and reliable solutions, instilling confidence.

The guidance on industry-standard practices and ways to minimize organizational risks while adopting AI technologies is very limited, and there's a pressing need for a responsible AI procurement toolkit.

This toolkit offers a holistic procurement process beyond the technical evaluation of capabilities of the solution providers that can be tailored as per the needs of the organization and the industry it operates in. It enables a clear understanding of the business strategies that are driving the need to procure an AI solution; the commercial implications of the decision; quantity, quality and security of the data involved; the governance necessary for accountability and risk management; and the impact on the organization's ethics and sustainability policies.

Further, it explores the role of various internal stakeholders – from procurement to product to legal to IT and others – in addressing the five key considerations in this toolkit, which will steer an organization's procurement team in the right direction.

Overall, this AI procurement toolkit provides comprehensive, non-prescriptive and industry-agnostic guidelines that will establish a procurement process to facilitate the selection of a suitable, ethical AI solution.

# Appendix

## A1 Preliminary understanding and assessment

When a company ventures into the market to explore AI offerings for the first time, it is beneficial to begin with a few preliminary questions for all potential suppliers. These questions, meant for preliminary understanding and assessment, will help the organization understand the applicability and fitment of the suppliers and their solutions to requirements.

Typically, commercial strategy questions are not included in this evaluation stage as they are addressed in subsequent steps of the procurement

process after the scope of requirement is clearly defined, along with a narrowed-down list of comparable AI solutions.

This exercise will help streamline and focus the effort required in the detailed assessment.

The following list of questions will help buyers in their initial assessment. To this, they can add more solution domain/industry-specific questions to drive a better understanding of the potential solutions.

TABLE 9 The first step: questions to ask

Specifications	Preliminary considerations
1. Business strategy	<ul style="list-style-type: none"> <li>– What kind of <b>assurance</b> or <b>warranty</b> does the supplier offer regarding the process and business outcomes?</li> <li>– How is the proposed AI/ML solution an <b>optimal approach</b> to meet requirements? Can the supplier provide case studies to support their response?</li> <li>– Does the solution <b>measure</b> business results and user satisfaction? If so, how are these insights used for product modifications or upgrades?</li> <li>– Does the supplier provide <b>key performance indicators (KPIs)</b> for monitoring <b>performance drifts</b> that may prompt retraining of the model?</li> </ul>
2. Data strategy	<ul style="list-style-type: none"> <li>– What <b>data quality assurance</b> processes and frameworks (storage, management, transfer etc.) does the supplier follow?</li> <li>– In the case of external data ingestion, how does the supplier ensure complete, relevant, unbiased and timely data? Who is responsible for ensuring the quality, usability and reliability of third-party data?</li> </ul>
3. Ethics and sustainability	<ul style="list-style-type: none"> <li>– What methods are used to train the AI model? Do the <b>training methods</b> uphold the principles of ethics (fairness, interpretability, privacy, security etc.)?</li> <li>– Can the supplier identify possible <b>sources of bias</b>? What are the checks in place within the model to prevent biases from creeping in?</li> <li>– Does your solution address new and emerging ethical risks such as misinformation, over-reliance and loss of skills?</li> </ul>
4. Governance, risk and compliance	<ul style="list-style-type: none"> <li>– Does the supplier comply with <b>data-related regulations</b> (e.g. General Data Protection Regulation (GDPR), California Consumer Privacy Act (CCPA), Health Insurance Portability and Accountability Act (HIPAA), Children's Online Privacy Protection Act (COPPA) etc.)?</li> <li>– Does the supplier follow any <b>AI governance standards</b> and best practices set by international standards organizations (such as the International Organization for Standardization (ISO) and the Institute of Electrical and Electronics Engineers Standards Association (IEEE))?</li> </ul>

# Contributors

The report was co-created with active guidance and support from experts and diverse stakeholders in the World Economic Forum project community on Shaping the Future of Technology Governance, who shared insights and lessons learned through interviews, workshops and consultation sessions. The opinions expressed herein do not necessarily reflect the views of the individuals or organizations involved in the project or listed below. Sincere thanks are extended to those who contributed their insights via interviews and workshops, as well as those not captured below.

## World Economic Forum

**Benjamin Larsen**  
Lead, Artificial Intelligence and Machine Learning

## GEP

**Aditya Desai**  
Director, Consulting

**Joanne Jacob**  
Senior Consultant, Consulting

**Sitharthan K**  
Senior Consultant, Consulting

**Mudit Kumar**  
Vice President, Consulting

**Raina Saxena**  
Senior Director, Consulting

**Hemanty Tudu**  
Senior Consultant, Consulting

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**Uthman Ali**  
Digital Ethics Lead and Senior Product Analyst, bp

**Chloe Autio**  
Director, Policy, The Cantellus Group

**Ivar Beljaars**  
Senior Vice-President, Sales, CUJO AI

**Megha Chawla**  
Manager, Open Innovation and Tech Evangelist, HCLTech

**Amy DeCicco**  
Vice-President, Marketing, retrain.ai

**Sachin Dev Duggal**  
Chief Wizard, Builder.ai

**Dean Horton**  
Digital Security Risk Manager, Procurement, bp

**Austin Imperato**  
Chief of Staff, Government and Regulatory Affairs, IBM

**Igor Jablovkov**  
Chief Executive Officer, Pryon

**Mukund Kalmanker**  
Vice-President and Global Head, AI Solutions, Wipro

**Vijay Karunamurthy**  
Field Chief Technology Officer, Scale AI

**Paige Kassalen**  
Head, Customer Operations, CrowdAI

**Abhinav Khare**  
Head, Tech Venturing and Open Innovation Ecosystem, HCLTech

**Simon Greenman**  
Partner, Best Practice AI

**Abhishek Gupta**  
Senior Responsible AI Leader and Expert, Boston Consulting Group (BCG)

**Meirav Oren**  
Chief Executive Officer and Co-Founder, Versatile

**Claudia Perry**  
Digital Graduate, Digital Science, bp

**Devaki Raj**  
Chief Executive Officer, CrowdAI

**Nikita Sejpal-Shah**  
Cloud and IoT Lead, Procurement, bp

**Karen Silverman**

Chief Executive Officer and Founder, The Cantellus Group

**Navrina Singh**

Founder and Chief Executive Officer, Credo AI

**Jascha Stein**

Co-Founder and Chief Executive Officer, OmniBot.ai

**Andy Smith**

Principal Security Architect, bp

**Laura Taddei**

Director, Business Affairs, BenevolentAI

**Erik Vogt**

Vice-President, Enterprise Solutions, Appen

## Production

**Studio Miko****Laurence Denmark**

Creative Director

**Martha Howlett**

Editor

**Oliver Turner**

Designer

# Endnotes

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**World Economic Forum**  
91–93 route de la Capite  
CH-1223 Cologny/Geneva  
Switzerland

Tel.: +41 (0) 22 869 1212  
Fax: +41 (0) 22 786 2744  
[contact@weforum.org](mailto:contact@weforum.org)  
[www.weforum.org](http://www.weforum.org)