

*Unlocking Public Sector AI*

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# AI Procurement in a Box: Project overview

TOOLKIT  
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# Foreword



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The promises of artificial intelligence (AI) technologies are literally beyond the capacity of our imagination. The risks that accompany these developments are also impossible to predict. At this pivotal moment in the adoption of AI by governments globally, there is an opportunity to establish a set of actionable procurement guidelines to enable good decision-making that can also be evaluated.

Government procurement officials cannot be expected to have the most up-to-date knowledge in every highly specialized field. To safeguard the responsible future use of AI technologies, a multistakeholder effort with cross-sector participation and interdisciplinary expertise is required to create authoritative guidelines. The procedural norms are even more urgent now. What information should be recorded and how explanations need to be documented is what lays the foundation for fairness and impartiality in the administrative process. To preserve due process and predictability, a coalition can help ensure that the right questions are asked.

The Forum offers the *Procurement in a Box* package, a pragmatic guidebook to unlock public-sector adoption of AI through government procurement. This was the aspiration of our project. This work offers a set of complementary tools to demonstrate the emerging global consensus on the responsible deployment of AI technologies.

The Procurement in a Box project has taken shape at a time when the social contract between the government, its citizens, and their industries is suspended and is about to reset. The COVID-19 pandemic has further emphasized the imperative for responsible innovation and the ethical use of technology. We now know how vulnerable an interdependent world can be. Solving complex

societal problems with pattern recognition and predictive algorithms is an integral part of the new social contract.

The scenarios of how government may use AI technologies is already taking place. For example, chat bots are increasingly being used by government agencies to effectively manage overwhelming inquiries from the general public, but have also increased the concern that sensitive information about people may be misused in the future. Similarly, applying predictive policing to help manage law enforcement has helped fight crime, but has also exposed the bias and discrimination that are embedded in society.

Setting standards to obtain essential information and create cooperative relationships can have a profound impact on mitigating these harms. AI technologies demand special attention because automated processes amplify and propagate bias swiftly and these technologies are growing in prominence. The Procurement in a Box offers important guidance to help prepare for the future.

This project has helped identify useful mechanisms to inform technology policy in the Fourth Industrial Revolution. Shaping the norms for AI procurement in the public sector will significantly influence best practice in the rest of the market and throughout the industry. The recommendations and supporting material in this package are intended to be put into practice. The resources are available publicly as a “living document” to encourage wide adoption as well as ensure the guidelines evolve with insights from a range of trials.

The Forum looks forward to continuing to work together to keep AI technologies and their use responsible and ethical.

## 2

# Introduction

## 2.1 What is *AI Procurement in a Box*?

*AI Procurement in a Box* is a practical guide that helps governments rethink the procurement of artificial intelligence (AI) with a focus on innovation, efficiency and ethics. Developing a new approach to the acquisition of emerging technologies such as AI will not only accelerate the adoption of AI in the administration, but also drive the development of ethical standards in AI development and deployment. Innovative procurement approaches have the potential to foster innovation, create competitive markets for AI systems and uphold public trust in the public-sector adoption of AI.

AI has the potential to vastly improve government operations and meet the needs of citizens in new ways, ranging from intelligently automating administrative processes to generating insights for public policy developments and improving public service delivery, for example, through personalized healthcare. Many public institutions are lagging behind in harnessing this powerful technology because of challenges related to data, skills and ethical deployment.

Public procurement can be an important driver of government adoption of AI. This means not only ensuring that AI-driven technologies offering the best value for money are purchased, but also driving the ethical development and deployment of innovative AI systems. Government as a powerful market player can set standards when it comes to the ethical development of technologies and

has done so in cybersecurity and cloud policy in recent decades. Public procurement has been shown to deliver strategic goals in areas such as environment and human rights and offers an attractive tool for policy-makers to address wider societal issues. Nevertheless, it is not straightforward and careful development of processes and incentives need to be considered to achieve strategic maturity of commercial actions.

These actions are more important than ever when it comes to the adoption of AI. Failure to promote ethical and technically robust considerations, diversity and openness through AI procurement may also lead to poor procurement decisions for AI systems. This can limit accountability, undermine social values, entrench the market power of large businesses, decrease public trust and ultimately slow digital transformation in the public sector.

To help governments unlock the potential of AI in the public sector the World Economic Forum's Centre for the Fourth Industrial Revolution in collaboration with the Government of the United Kingdom, Deloitte and Splunk has created *AI Procurement in a Box*. This practical guide helps policy-makers and commercial teams rethink their approach to AI procurement to more effectively and ethically adopt AI technologies in the public sector.

The guide includes:

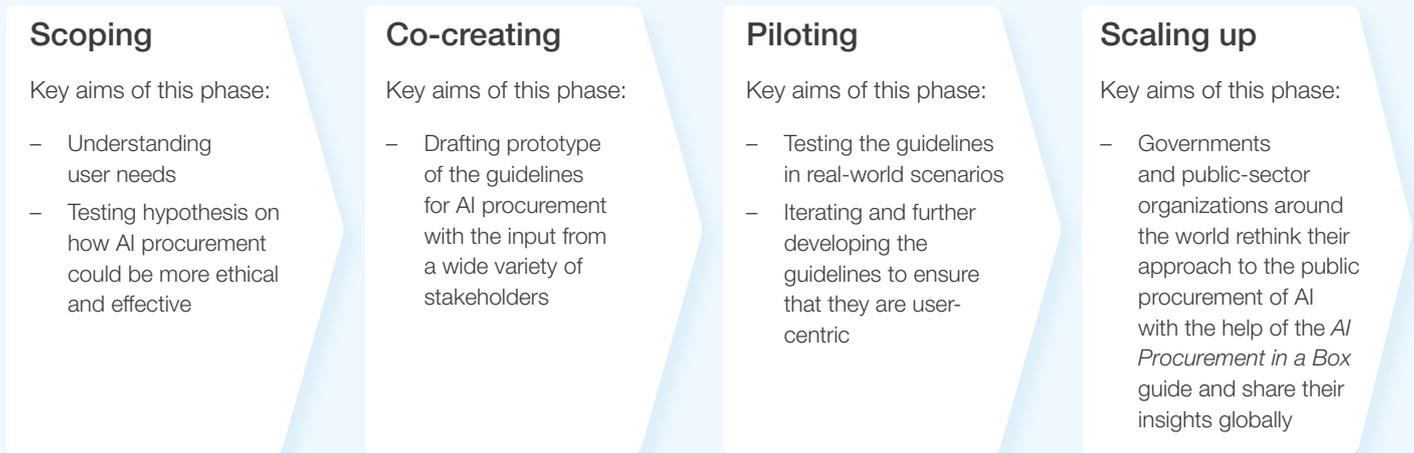
|    | <b>Module</b>  | <b>Principles</b>  | <b>Purpose</b>  |
|----|--|--|---|
| 01 | <a href="#">Guidelines for government AI procurement</a>           | These are principle-based guidelines for AI procurement presenting the general considerations to be taken when procuring AI-powered solutions.                               | The guidelines are an introduction to the most important topics that need to be addressed when reconsidering the approach to AI procurement. They aim to help reshape public procurement in the context of AI and are the building blocks of the guide. |
| 02 | <a href="#">Workbook for policy and procurement officials</a>      | The workbook includes a selection of instruments and templates that sit alongside the guidelines.  | This is a summary of tools that aims to help users with actively rethinking the approach to AI procurement.   |
| a  | <b>Risk assessment</b>   | Example decision criteria for conducting an AI project risk assessment.  | This assessment can be a useful basis to develop a proportionate approach to AI procurement. Depending on the use case the issues needed to be considered can vary.   |
| b  | <b>User manual</b>   | A set of questions that highlight the main considerations that users should be able to address when implementing the guidelines.   | The questions seek to direct users through the guidelines and prepare them for implementation.  |
| c  | <b>AI specification and evaluation tool</b>                        | Examples of requirements to include in an RFP and examples of robust practices to look out for when evaluating RFP responses.  | This should help procurement teams to draft the RFP specification and evaluate the tender responses.  |
| d  | <b>Workshop slide pack: How to kick-off the implementation</b>     | A slide pack summarizing the agenda, content and facilitation ideas for guidelines implementation workshops.   | This workshop template gives ideas to workshop facilitators on how to best design multi-stakeholder workshops for the implementation of the guidelines.   |
| e  | <b>Case studies</b>  | A selection of examples from government and private-sector actors who have procured AI previously.   | These examples seek to inspire public- and private-sector actors to reconsider the way they are procuring AI technologies.  |
| 03 | <a href="#">Challenges and opportunities during implementation</a> | This document is an overview of the findings from workshops conducted in Bahrain, the UAE and the UK, which focused on translating the guidelines from theory into practice. | The workshop insights provide users with an overview of the themes and important aspects to consider when implementing the guidelines.  |
| 04 | <a href="#">Pilot case studies from the United Kingdom</a>         | This document summarizes and analyses the pilot of the guidelines carried out in the UK.   | The lessons learned are designed to provide helpful tips for other organizations seeking to use the guidelines.   |

## 2.2 How did we get here?

The Centre for the Fourth Industrial Revolution is a global hub of expertise, knowledge-sharing and collaboration, based in San Francisco. The Centre develops, pilots and scales up agile and human-centred governance tools that can be adopted by policy-makers, legislators and regulators worldwide to address challenges related to emerging technologies.

Together with more than 200 stakeholders from government, academia, the third sector and business, the Centre created the *AI Procurement in a Box* during the course of 15 months.

FIGURE 1 Project phases



### Scoping

The team started by exploring the challenges to government procurement. After two workshops in San Francisco and London and

following extensive consultation with experts worldwide, five key challenges to government procurement of AI were identified.

FIGURE 2 Challenges to government procurement of AI technologies



The lack of data sharing and data governance in the public sector often leads to a lack of data availability discoverability and usability. Since data is currently often the basis of any AI development, these challenges are a great barrier to AI adoption. The team also discovered that sector officials may lack the appropriate knowledge and expertise to make strategic buying decisions for AI-powered solutions. Uncertainty about ethical considerations adds further layers of complexity. As a result,

officials tend to delay buying decisions or reduce perceived risk by purchasing solutions from large and well-known suppliers. For a more detailed description of the main roadblocks see here.

To address these challenges, the team agreed to develop an overview of the important drivers of more effective ethical public procurement and ideas for policy-makers as to how to incorporate these into action.

## Co-creating

The team drafted the procurement principles, which included the findings from the workshops, consultations and input from more than 100 stakeholders from business, academia and government. Comments were facilitated through webinars, community calls, roundtables and workshops, for example with 30 senior commercial specialists from Central and Latin America hosted by the Inter-American Development Bank.

The aim of the guidelines is to maximize the value of data while also setting the highest standards for transparency and accountability when buying new

AI and machine learning (ML) technology. Enhanced procurement processes help promote the use of AI and ML, giving the public sector more tools to develop the economy and better serve the public.

The guidelines also inform suppliers about the technical and ethical requirements of public-sector bodies related to these technologies. They aim to address specific business needs from the public and private sector as well as to support public trust in the government adoption of AI. Overall this should lead to more efficient, responsible and sustainable outcomes for the public and private sectors.

## Piloting and iterating

During the pilot phase the procurement guidelines were used by teams in the United Kingdom's Department for Business, Energy and Industrial Strategy and the Food Standards Agency (see pilot report for more detail) and facilitated workshops in Bahrain, the UAE and the UK to test them with government leaders (see key insights for the workshops [here](#)).

It became clear that practical tools are needed to tailor the guidelines to national contexts. The

principle-based guidelines are useful to introduce the key concepts, but more work is needed to implement them in different jurisdictions. Therefore, the team created a workbook that sits alongside the AI procurement guidelines. It aims to provide government officials and industry with greater clarity on their purpose and enable them to embed the guidelines into their procurement considerations. The workbook aims to bring the guidelines to life and provide practical guidance into all issues that they raise.



## 2.3 How do you use the *AI Procurement in a Box*?

The *AI Procurement in a Box* guide will help governments and public-sector organizations to start rethinking their approach to the public procurement of AI technologies. When developing the guide, the team took a module-based approach, at the heart of which the guidelines for AI procurement sit. It is recommended that users of the guide follow a step-by-step approach to implementing the guidelines.

Users of the *AI Procurement in a Box*:

- Governments that aim to accelerate AI adoption in a safe, ethical and innovative manner
- Policy officials to accelerate attainment of their policy goals
- Procurement officials and commercial teams to develop AI-related requests for proposals and to manage procurement processes
- Data practitioners and technology experts (e.g. statisticians, data scientists, digital delivery managers) to safeguard public benefit and identify and manage potential risks
- AI-solutions providers to better understand the core expectations for government AI projects and to align their proposals with emerging standards for public procurement

Any institution or government that aims to adopt the guidelines in an incremental manner and to drive strategic change by involving actors from throughout the organization should follow these stages described below:

### Learn

Facilitate internal and external multistakeholder discussions into what AI is and review the opportunities and risks of AI. Provide specific examples of how AI is currently already used in the public sector and gather best practices and case studies for AI adoption from other organizations worldwide.

### Review

Study the guidelines and consider the case studies that can offer you insights into how other organizations have procured AI technologies.

### Discover

Explore your current procurement practices and compare them with the approach described in the guidelines.

### Tailor

Match the guidelines with your current processes and develop a new approach to procurement that you test in different scenarios. Learn from the pilots and further develop the tools in the *AI Procurement in a Box* guide to ensure user-centric guidance for your procurement teams.

### Implement

Share the insights from the pilots and complete the adoption of new processes and standards.

How these stages play out in practice will most likely vary from organization to organization and from country to country, as well as depend on factors like maturity of AI adoption and organizational structures. Nevertheless, implementation methods that focus on multistakeholder discussions and the development of a coherent strategy are recommended. A good starting point is to hold workshops and round tables in collaboration with AI experts and developers, including but not limited to, consultancies, prominent IT service providers, start-ups, universities, research institutes and citizen rights organizations.

Please get in touch with your insights once you've trialed this guide: [ai@weforum.org](mailto:ai@weforum.org)

# Acknowledgements

The World Economic Forum's Unlocking Public Sector Artificial Intelligence project, in collaboration with the Government of the United Kingdom, Deloitte Consulting and Splunk is a global, multistakeholder and cross-disciplinary initiative intended to help shape the public sector's adoption of AI, and emerging technologies in general, around the world. The project has engaged leaders from

private companies, governments, civil society organizations and academia to understand public-sector procurement of AI technology, identify challenges and define principles to guide responsible and ethical procurement. The opinions expressed herein may not correspond with the opinions of all members and organizations involved in the project.

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