Tabletop exercise: Indicative Public Value Mapping of Artificial Intelligence

Artificial Intelligence in the Public Sector

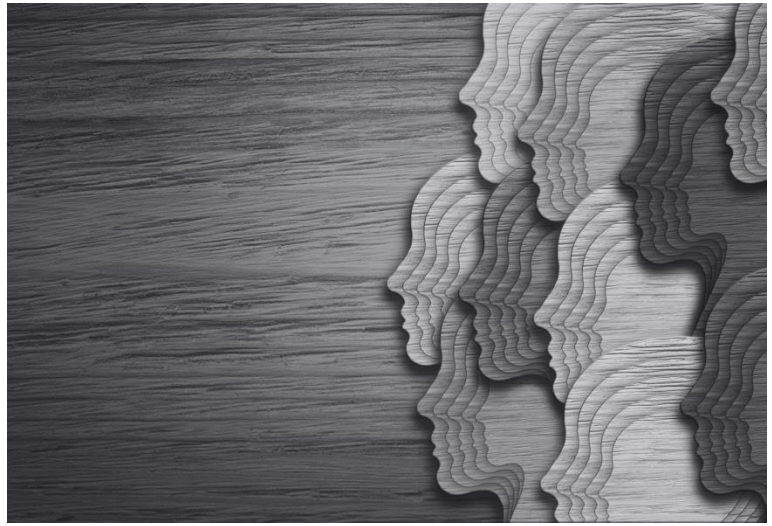
Artificial Intelligence (AI) is not an end in itself

AI in the public sector

- Improve the quality of services
- Foster trust
- Increase efficiency and service delivery outcomes

Governments must ensure that AI is adopted effectively for the public good

Public Value Creation

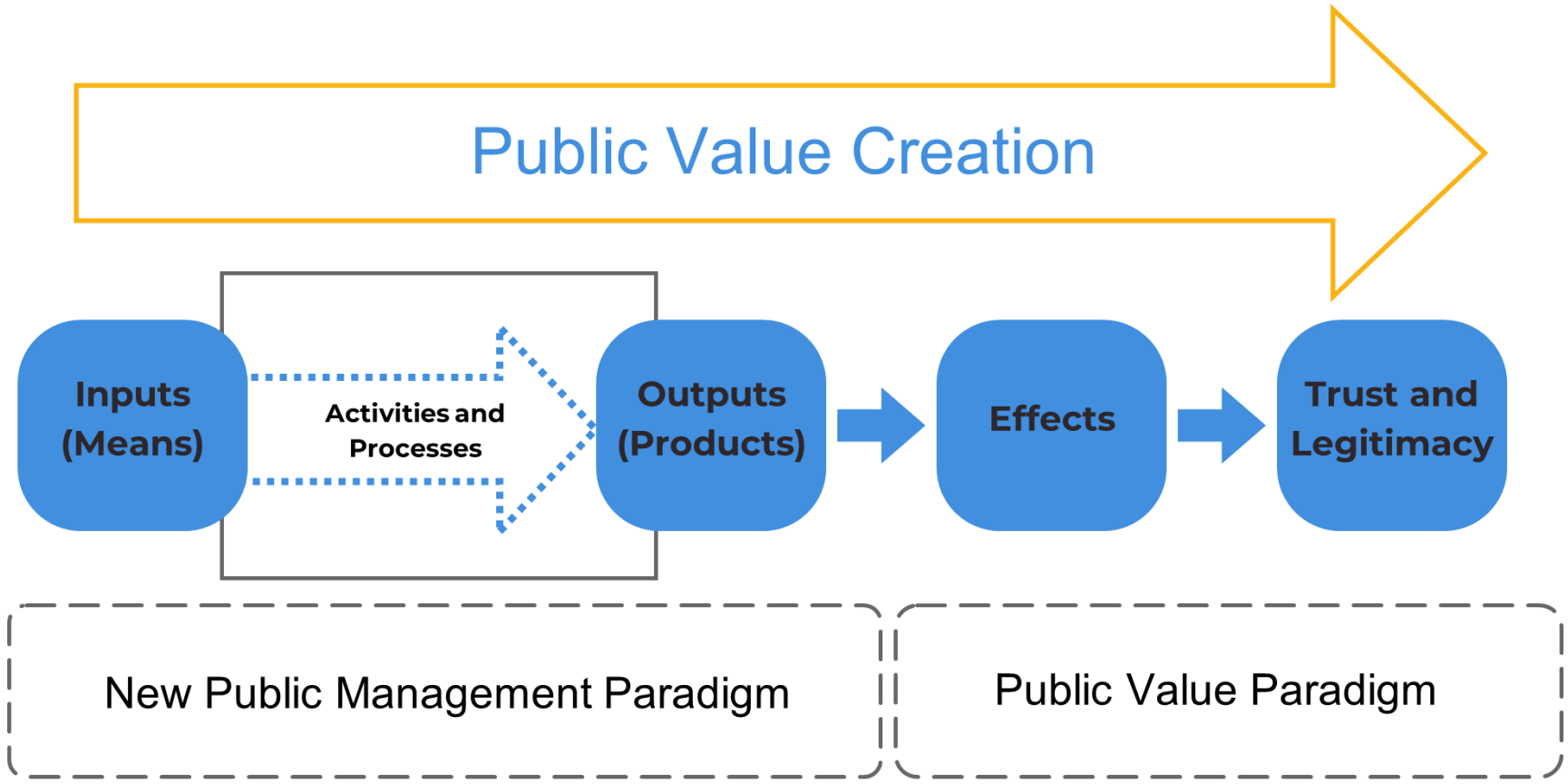


Public value is defined by the citizens who consume the products and services, rather than the producers

Public organizations' primary focus should be on what is valued by the public

Public Value Management highlights longer-term outcomes of the public sphere

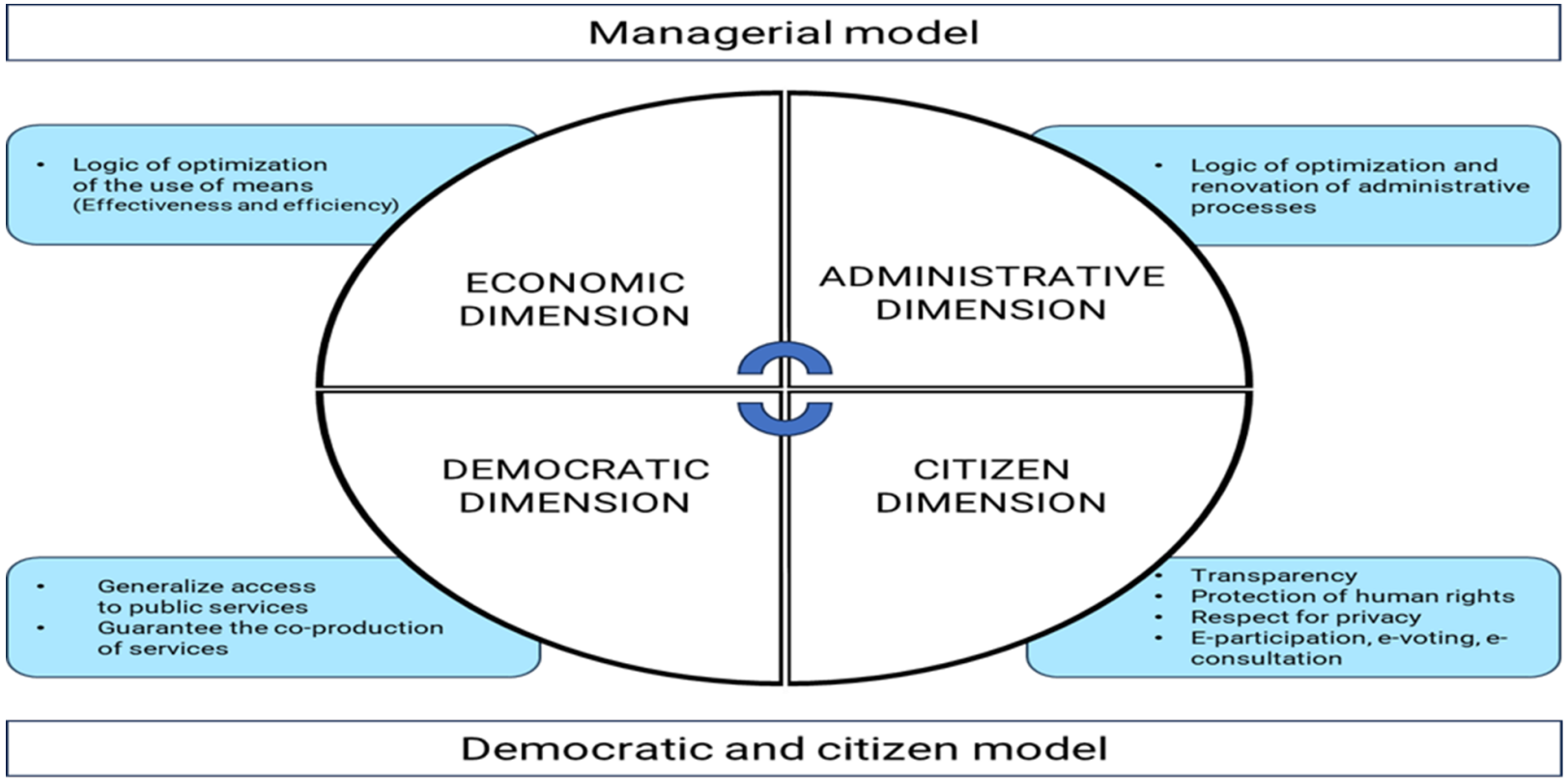
Shifting focus from outputs to outcomes



Source: Adapted from Amrani et al., 2022.

The Public Value Creation paradigm extends the value chain to incorporate effects, and trust and legitimacy as part of the outcome process

Framework for Assessing the Effectiveness of Artificial Intelligence on Public Value Creation



Adapted from Amrani et al., 2022

Economic Dimension

Category	Component	Characteristic
Benefits	Costs	
	Efficiencies	
	Automating processes	
Threats / Considerations	Costs	
	Resources	
Risks	Economic harm	

Administrative Dimension

Category	Component	Characteristic
Benefits	Security and accuracy	
	Sustainability	
Threats / Considerations	Competence	
	Infrastructure	
	Data availability	
	Legality	
Risks	Security	
	Integrity	

Democratic Dimension

Category	Component	Characteristic
Benefits	Citizen interaction	
Threats / Considerations	Accountability	
	Cooperation	
Risks	Transparency	
	Trust	
	Democracy	

Citizen Dimension

Category	Component	Characteristic
Benefits	Service quality	
	Personalization	
	Accessibility	
Threats / Considerations	Service quality	
Risks	Data quality	
	Loss of jobs	

Economic Dimension

Category	Component	Characteristic
Benefits	Costs	Adopting the AI system should **reduce the overall cost** of operations with **maximum ROI**.
	Efficiencies	The AI system should make the process more **efficient and effective** and save time.
	Automating processes	AI systems should be used in different ways to **automate operations**.
Threats / Considerations	Costs	The cost to develop new technological solutions, particularly within AI are **large and will increase**.
	Resources	**Limited network infrastructure and capacity**, particularly latency, could challenge the processing and response time of systems.
Risks	Economic harm	AI can lead to **discrimination, lower trust, cause economic harm and affect how democracy functions**.

Administrative Dimension

Category	Component	Characteristic
Benefits	Security and accuracy	Workflow processes of administrative records can be monotonous and time-consuming for staff, which can lead to mistakes. The adoption of AI to process workflow processes **frees case handlers to focus on more complex cases**, with a **reduced risk for mistakes**.
	Sustainability	Artificial intelligence models can be used to achieve **higher levels of sustainability**, **optimize processes** and **integrate value chains**.
Threats / Considerations	Competence	An adequate number of **skilled individuals with the requisite knowledge** for developing and using AI technology is critical. Further, there should be at least a **basic level of knowledge and competence in AI** within the broader society to foster sustained uptake.
	Infrastructure	Various **types of computation, network and technology infrastructure** are required to ensure the full development and utilization of AI within the public sector.
	Data availability	AI models also require **access to large data sets** for training. Critical, in this regard, would be the ability for these data sets to be combinable with different data.
	Legality	Requisite **laws, regulations, policies, and procedures** are necessary to ensure appropriate protections.
Risks	Security	As AI systems become more advanced and connected, there is a **risk of increased vulnerability and exposure to cyberattacks**.
	Integrity	**Data integrity can be compromised**, leading to **inaccurate outcomes and decisions**, including data manipulation that could lead to **misinformation**.

Democratic Dimension

Category	Component	Characteristic
Benefits	Citizen interaction	Automating various processes to **leverage AI tools**, such as ChatBots and voice processing systems, can **improve citizens' contact experience**.
Threats / Considerations	Accountability	If the society is to accept the growing role of AI in areas which previously included human intervention, data protection, transparency, and **ethical AI** use are required to ensure **public trust** that the **systems are accountable and outcomes predictable and explainable**.
	Cooperation	**AI deployment across public sector agencies should be fairly homogenous**. The absence of inter-agency cooperation in research, development, data availability, and competency could, for example, lead to **unnecessarily onerous adoption costs** where each agency "**reinvents the wheel**".
Risks	Transparency	Unexplainable AI and other **Blackbox AI algorithms** can lead to outcomes that **undermine fairness, predictability and transparency in the delivery of services**.
	Trust	**Overly optimistic reliance on AI and overly pessimistic scepticism** can **erode public trust**, particularly when systems are in their nascent phase of deployment, thus **impacting their long-term adoption**.
	Democracy	AI can **lower the threshold of attacks against democratic functionality** through **misinformation** and the **perpetuation of bias** found in training data.

Citizen Dimension

Category	Component	Characteristic
Benefits	Service quality	The **opportunity to implement assessments and analyses** that are beyond human capability can contribute to **improving the quality of service delivered to citizens**.
	Personalization	As a result of their built-in capabilities for learning, AI systems are able to **understand the customer and adapt the interaction** to ensure a better user experience.
	Accessibility	Adopting AI systems in the public sector provides citizens with **increased levels of access to services**, both in terms time of day, as well as location for accessing the service.
Threats / Considerations	Service quality	The use of supplemental and other types of data to compliment the primary corpus could raise questions regarding **ownership**, **quality assurance** and **accessibility**.
Risks	Data quality	Inaccurate and otherwise undesirable results can pose a risk if the data quality is insufficient, such as **data transcription errors**, **systemic faults in data collection**, and **inaccurate sources and labelling of data**.
	Loss of jobs	Risk for job loss is **not limited to menial operations**, and could include para-professional positions, whose process of analysis can be categorized as routine and repetitive.

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