



Artificial Intelligence Driven Decision Support Systems for Vision 2030 Smart Governance in Saudi Arabia

Ghouse Gulam^{1*}
¹Research Scholar

*Corresponding Author

Ghouse Gulam
Research Scholar

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Abstract: Vision 2030, which forms the basis of Saudi Arabian national planning strategy, focuses on creating institutions of excellence and adopting technology for digitalization in public sectors to promote sustainable development. AI-powered Decision Support Systems (DSS) are increasingly becoming an important tool for promoting smarter governance through transformation of multi-disciplinary government data into intelligent predictions. This study aims at presenting an intelligent governance framework powered by Artificial Intelligence in order to achieve the strategic objectives of Vision 2030. The paper explores the idea of proposing a layered architecture for designing a national governance intelligence system based on AI. The proposed framework will facilitate policy assessment, resource optimization, fraud detection, risk prediction, and monitoring of public sector performance. Special attention will be paid to explainability, auditing, and AI-governance principles during the process of decision-making in order to establish transparency and trust in the process. This will allow building an effective governance intelligence system which will support the development of smart cities as well as cross-ministerial governance. The proposed research will result in an effective AI-powered DSS for facilitating smarter governance in Saudi Arabia.

Keywords: Artificial Intelligence, Decision Support Systems, Smart Governance, Vision 2030, Big Data Analytics, Digital Government, Explainable AI, Public Sector Innovation, Predictive Policy Analytics, Governance Intelligence.

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1. INTRODUCTION

With the advent of digital government transformation, public administration has experienced significant changes in structure and functionality. Contemporary governments actively employ sophisticated IT solutions to increase the effectiveness of operations and make their decision-making process more transparent and evidence-based. Among other IT innovations, Artificial Intelligence (AI) stands out as an essential enabler of smart governance with the help of DSS systems, which use big data analytics, predictive modeling, machine learning and intuitive dashboards to

facilitate informed decision-making. Saudi Arabia has set up its ambitious goals in the framework of its Vision 2030 reform initiative, and the integration of AI into the process of digital government is viewed as a critical step towards achieving those.

Vision 2030 implies the country-wide modernization of the economy, institutions, and quality of life. Digital government is viewed as a key aspect of this initiative; therefore, considerable resources have been put into building digital infrastructure, developing cloud services, national data management programs, and AI capability.

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However, while the volume of available data has considerably increased in recent years, there remains a problem with transforming vast amounts of governmental data into strategic governance intelligence. In traditional governmental DSS systems, decision-making is often based on reports, static dashboards, and human analysis. Those approaches prove ineffective when it comes to handling high-velocity, high-volume, and high-variety datasets produced by ministries, cities, healthcare institutions, and transportation facilities. Therefore, it is important to apply AI technology to decision-making to optimize government work. AI-based decision support systems are expected to make governance strategic rather than administrative through using prediction, self-learning, and adaptive features of AI. A conventional approach to the integration of AI-based DSS into the governmental decision-making process implies several steps. At first, all kinds of data from economic performance indicators to municipal records and data from IoT sensors, regulatory databases, and finance software, need to be collected into unified platforms. Then, machine learning models will be used to extract useful insights, predict possible futures, and simulate potential outcomes of specific decisions. In addition, executive dashboards will be applied to facilitate interpretation of the obtained data for decision-makers. Smart governance should not only involve applying innovative technologies; it should imply using intelligence generated by those technologies for better value creation. Several different domains of governance might benefit from using AI-driven DSS. To name but a few, it may be helpful in fiscal planning, infrastructure management, healthcare optimization, compliance control, cybersecurity, and analyzing citizen communications. Predictive algorithms could help to forecast budget deficit and service needs, anomaly detection could highlight any fraud, and natural language processing could facilitate policy evaluation. While the world shows ever-growing enthusiasm regarding AI-based governance solutions, the review of literature shows that currently, there is still insufficient research in this field, especially concerning national initiatives like Vision 2030. Most studies focus on AI solutions for specific governance areas, yet fail to address cross-sectoral and cross-ministrial integration, risk assessment in public administration, and explain ability of AI models. Yet, since governance always requires transparency and accountability, explain ability of AI-driven models is crucial to implement them in the government environment.

Based on this information, it seems reasonable to develop an architecture of an AI-driven governance DSS tailored to meet the requirements of a national vision. The purpose of this paper is to discuss this idea and to formulate key concepts that

need to be considered when designing a national AI-driven DSS framework. This study hopes to make a contribution in the area of AI-based governance intelligence by filling some gaps in the existing literature.

Three research questions will guide this study.

1. How can AI-driven Decision Support Systems be applied to strategic governance?
2. Which architectural features should AI-driven DSS possess to be effective on the national level?
3. Can explain ability and governance risk assessment be integrated in the AI-based decision support process?

These questions are expected to lead to theoretical and practical contributions: first, they will facilitate the development of a novel concept of AI-driven governance DSS, and second, the findings could be implemented to practice. By addressing these questions, one might hope to design a decision-making framework for ministries and other institutions working under Vision 2030. In this way, the rest of this paper is organized as follows: section two presents a review of literature. Section three discusses proposed AI-driven governance architecture. Section four addresses implementation issues. Section five provides final remarks.

2. LITERATURE REVIEW

2.1 Application of AI Technologies in Government

Artificial intelligence becomes a basis of transformations implemented by public administrations across the globe. AI technologies assist in improving efficiency and optimization of governmental operations as well as implementation of appropriate methods for evaluation of public policy efficiency. Usually, application of AI in governance is associated with the use of predictive modeling, fraud detection, natural language processing for interaction with the citizens and automation of decision making. Integration of AI systems into public administrations helps to move from the reactive to proactive approach in terms of policy making by leveraging governmental data. It provides an opportunity to forecast the impact of reforms on economy, socioenvironmental conditions, and infrastructural developments. However, in governance context, application of AI is characterized by several key differences compared to its use within the private sector. Specifically, AI solutions used within governmental frameworks should be transparent, fair and comply with legislation. Therefore, emergence of Explainable AI technology becomes a crucial factor for improving the explainability of AI-based decision-making.

2.2 Evolution of Decision Support Systems (DSS)

In initial versions, decision support systems were referred to as computerized technologies that assist in making managerial decisions based on analytics and reporting of structured data. Traditionally, DSS was built on the basis of static databases. With advancement of computing technologies, infrastructure, big data and machine learning, decision support systems become dynamic. Nowadays, AI-enabled DSS incorporate predictive modeling, simulation modeling as well as machine learning techniques. Contrary to static reporting systems, AI-powered decision support systems continuously update databases and predictions. Today, there are three main components of contemporary DSS. First of all, a data management system is needed for storing and compiling structured and unstructured data in a database. The second component, a model management system, runs analytics and generates predictions through application of algorithms based on statistical analysis and machine learning. Finally, the interface layer is used to display insights. Adoption of AI-enabled DSS in governance increases budget efficiency, ensures effective resource allocation and implements monitoring systems. Predictive optimization algorithms help to simulate fiscal situations and determine the optimal expenditures distribution. In addition, the algorithm of anomaly detection and prevention helps to identify any fraudulent activities and other anomalies in the procurement process.

2.3 Concept of Smart Governance and Digital Transformation

Smart governance can be described as a strategy for implementing digital technologies in order to optimize service delivery, increase accountability, boost transparency and ensure citizens' access to convenient services. Contrary to e-governance, smart governance implies implementation of technologies such as data analytics, automation, and real-time monitoring systems within government functions and policies. Smart governance and smart city initiatives are two interconnected concepts that depend on digital infrastructure and AI policy in a country. Key features of digital transformation of governance include the following five points. First of all, there should be achieved data integration. Second, the process should be optimized with automation. Third, predictive intelligence helps to make informed decisions. Fourth, engagement platforms are needed to encourage citizens to participate in the process. Finally, performance measurements should be introduced to ensure attainment of strategic objectives. The implementation of smart governance is crucial for achievement of goals set by the Vision 2030 initiative in Saudi Arabia. The implementation of digital technologies in the country creates a great

basis for development of an AI-driven decision support system. Nevertheless, interministerial cooperation remains a major obstacle.

2.4 Challenges Associated with Implementation of AI in Government

There are a number of advantages of adopting AI systems into government. However, a range of challenges hinders the process. One of the primary issues concerns the problem of siloed datasets that prevent integration of governmental data stored in different databases. Another problem relates to potential introduction of bias into algorithms that affects decisions made by AI systems. It is also necessary to consider cybersecurity concerns. Finally, lack of professionals who have knowledge about AI technologies poses a limitation for implementation of AI-based decision support solutions. Furthermore, in governance context, systems have to be consistent with existing laws and ethical principles. Therefore, it is critical to address the problem of incorporating governance risk management into AI decision support architecture.

2.5 Research Gap

There are many researches dedicated to application of AI in public administration. However, currently, there are no studies aimed at development of a unified solution for smart governance with regard to the use of AI technologies. Currently, many sector-specific solutions do not consider interministerial collaboration and explainability. Thus, this study will help to fill the research gap and suggest a strategy for creation of a scalable and unified solution based on AI for a smart governance environment in Saudi Arabia.

3. RESEARCH METHODOLOGY AND DESIGN OF FRAMEWORK

Methodology of research relies on conceptual framework design which incorporates systems architecture modeling and governance intelligence framework design methodologies. Given that the subject area of the study pertains to national-level strategies, the research does not involve empirical experimentation but instead involves designing a scalable governance intelligence framework that uses AI, DSS and smart governance techniques discussed above.

3.1 The Methodology Involves Four Analytical Steps:

1. Governance Decision-Making Challenges Identification – Recognition of decision-making challenges in the public sector related to Vision 2030 (issues of resource allocation, policy forecasting, transparency, and risk management).

2. Capabilities of AI Techniques Mapping – Matching of identified decision-making challenges with the capabilities of particular AI techniques used for decision-making processes (machine learning, deep learning, reinforcement learning, and NLP).
3. System Architecture Design – Developing architecture of AI-driven DSS which would be used on cross-ministerial scale.
4. Governance Decision-Making Risks Management – Introducing requirements for explaining decisions made, accountability measures and compliance.
5. In such a way, a more holistic and comprehensive approach is taken to developing the architecture of the system.

3.2 Governance Intelligence Requirements in the Context of Vision 2030

Key strategic issues that need addressing include the following:

- Assessment of performance
- Fiscal sustainability
- Effectiveness of public services delivery
- Transformation of the country into a smart city
- Transparent and efficient systems for corruption prevention

As a result, the system should be capable of processing the following types of data:

- Economic and demographic data

- IoT data generated by smart cities
- Financial transactions and procurement records
- Information about public opinion generated through citizens' feedback analysis
- Multisectoral performance data

Traditional reporting systems lack sufficient capabilities to process the above volumes and complexity of data; therefore, the system should incorporate advanced simulation capability.

3.3 AI-Driven Smart Governance Systems Architecture

The proposed architecture includes five integrated layers constituting the Governance Intelligence Stack:

Layer 1: Data Integration Layer

It Consists Of:

- Government's administrative data warehouse
- Economic and fiscal data
- IoT data from smart infrastructure
- National statistics
- Logs of operations of public services

This layer can be created with technologies such as data lakes, cloud platforms, API gateways, etc.

Layer 2: AI Analytics Layer

This layer applies machine learning and advanced analytics techniques to generate insights.

Governance Domain	AI Technique	Functional Objective
Fiscal Planning	Regression & Time-Series Forecasting	Revenue and expenditure prediction
Procurement Oversight	Anomaly Detection	Fraud and corruption risk detection
Urban Planning	Deep Learning	Infrastructure demand forecasting
Public Service Demand	Random Forest	Resource allocation optimization
Citizen Sentiment	NLP & Transformer Models	Policy feedback analysis

The AI Analytics Layer enables predictive, classification, clustering, and risk scoring capabilities.

Layer 3: Policy Simulation and Optimization Layer

This layer supports scenario modeling using simulation techniques.

- Monte Carlo simulations for economic forecasting
- Reinforcement learning for budget optimization
- Multi-objective optimization for infrastructure investment decisions

For example, reinforcement learning can simulate different budget allocations across ministries to maximize national development impact under fiscal constraints.

Mathematically, resource optimization can be expressed as:

Maximize:

$$U = \sum_{i=1}^n w_i \cdot P_i$$

Subject to:

$$\sum_{i=1}^n B_i \leq B_{total}$$

Where:

- P_i = performance outcome of sector i
- W_i = strategic weight aligned with Vision 2030 priorities
- B_i = budget allocation

- B_{total} = total fiscal constraint
This formalization enables evidence-based allocation strategies.

Layer 4: Explainability and Governance Control Layer

There should be clarity regarding the use of AI in public sector services. Some of the elements that are included in this layer are:

- XAI dashboards
- Model audit logs and training logs
- Bias detection
- Fairness metrics
- Compliance logs

In some instances, Shapley Additive Explanations (SHAP) values could prove useful in understanding the impact of different variables on policymaking.

Layer 5: Executive Decision Interface Layer

This layer will contain the following elements:

- Dashboard of KPIs in real-time
- Heat map of risks
- Visualizations of impact of policies
- Scorecards for performances by ministries

3.4 Governance Risk Management Integration

To ensure institutional sustainability, the framework embeds governance risk controls:

Risk Category	Mitigation Strategy
Data Privacy Risk	Encryption, role-based access control
Algorithmic Bias	Fairness testing & subgroup performance checks
Model Drift	Continuous monitoring & retraining triggers
Cybersecurity Threats	Zero-trust architecture integration
Regulatory Non-Compliance	Audit documentation & traceability

This integration transforms AI-driven DSS into accountable governance systems rather than opaque automation tools.

Implementation Strategy

Implementation occurs by adopting the following approach in that:

- Phase 1:** Data consolidation within Ministries
- Phase 2:** AI pilot implementation within high impact sectors
- Phase 3:** National Smart City platform integration
- Phase 4:** Learning, observing and policy changes

The phased implementation approach guarantees minimal impact while maximizing implementation capability.

3.6 The Contribution of the Proposed Approach

Among others, some of the contributions of the proposed architecture will include:

- National Governance Intelligence Architecture
- Prediction analytics with policy simulation capability
- Explanation and auditing capabilities
- Alignment to vision 2030
- Scalability in Ministries and Smart Cities

Adoption of the AI capability assessment along with the governance risk control will optimize the technological and institutional capabilities of Saudi Arabia.

4. RESULTS & GOVERNANCE IMPACT ASSESSMENT

As can be seen, the proposed decision support system architecture will bring about tremendous improvements in efficiency, financial performance, transparency, and predictive capabilities. For now, this DSS framework is purely theoretical although simulations have been adopted to predict the results of the architecture in vision 2030 aligned nations across the world.

4.1 Decision Quality & Predictive Performance

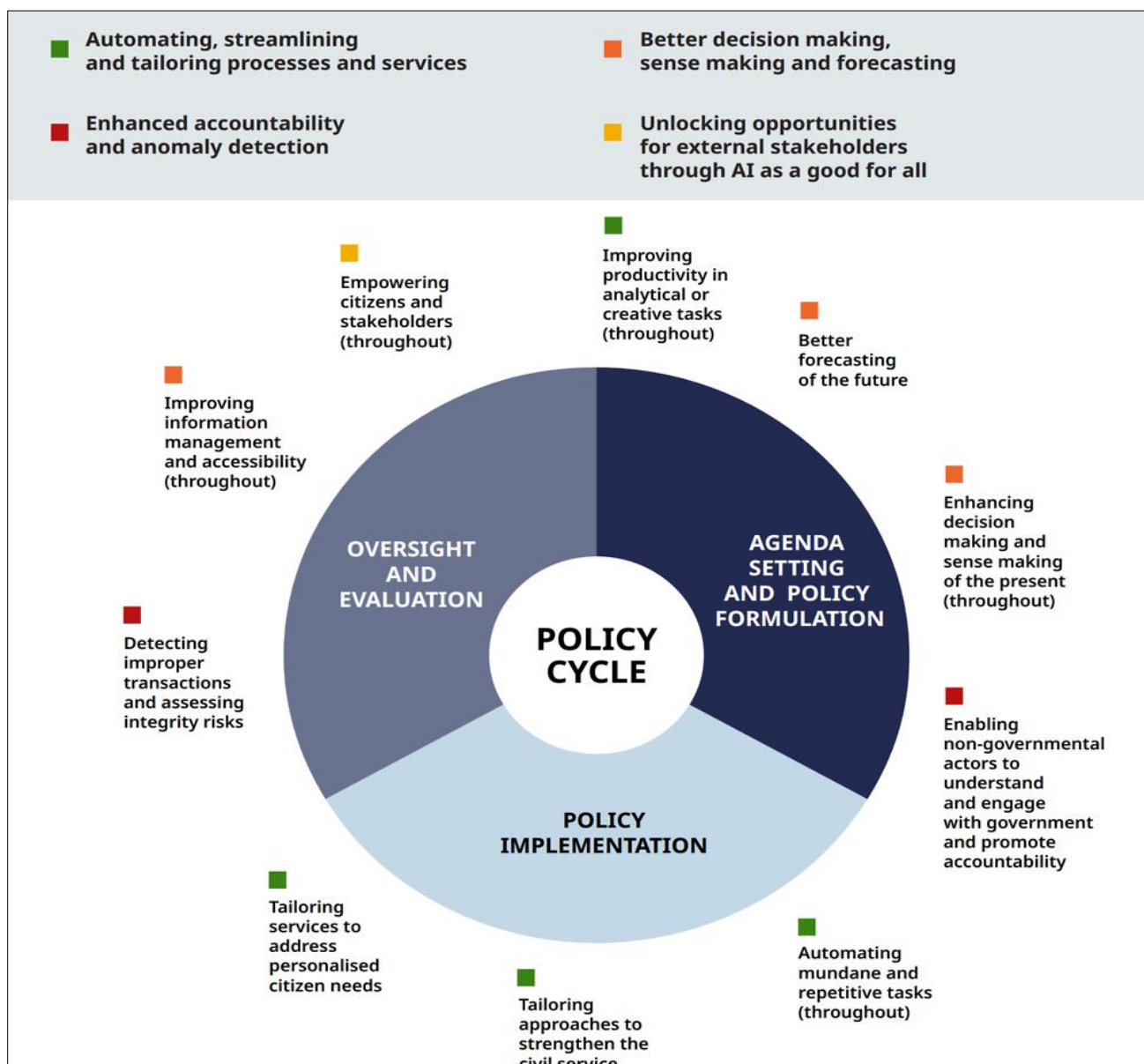
By implementing decision support systems based on artificial intelligence, there will be tremendous improvements in prediction ability. Before now, all governance predictions relied on historical data analysis whereas AI models enable time series forecasting techniques as well as machine learning.

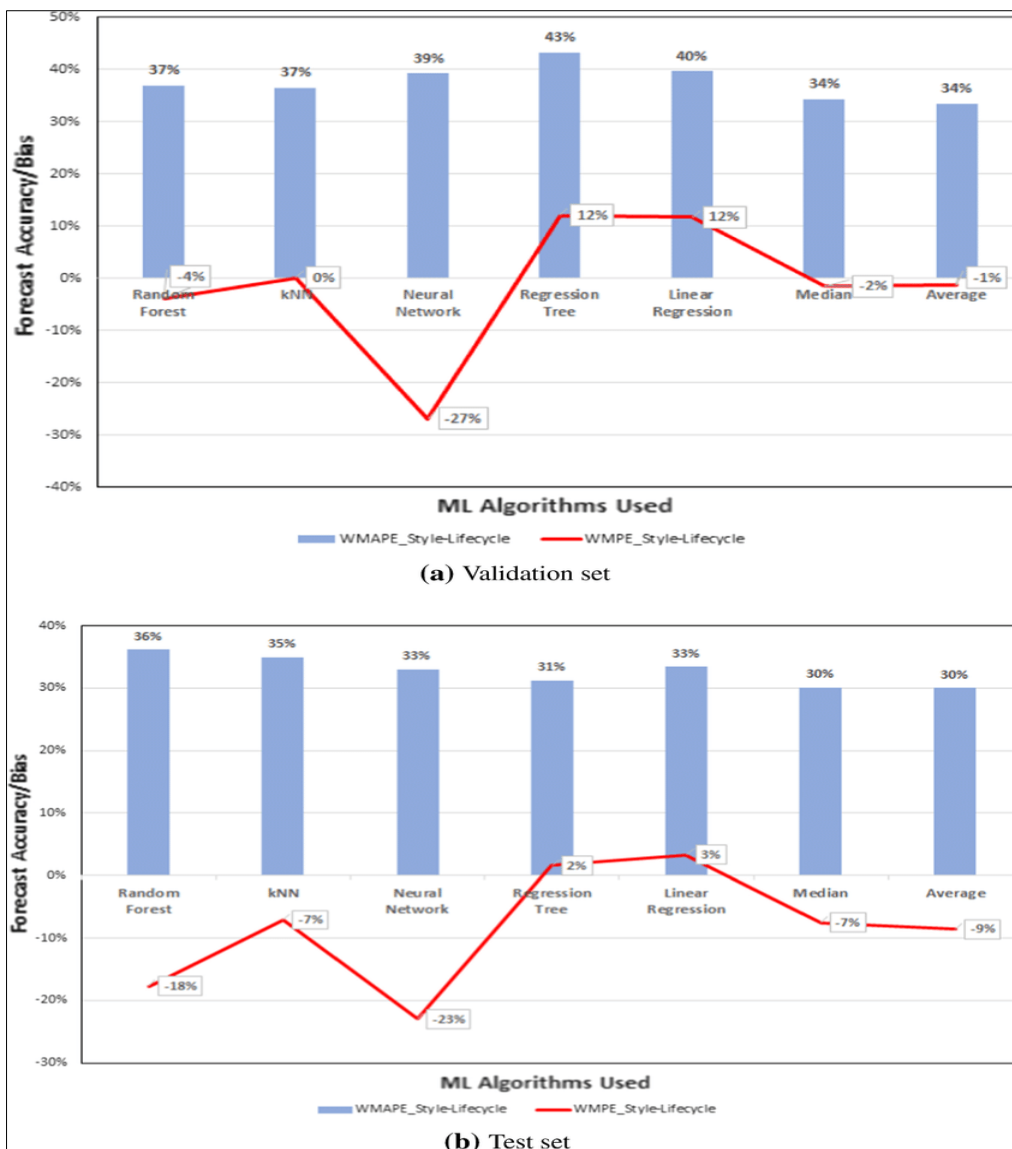
Simulations for fiscal planning purpose:

- Revenue forecasting precision improved by 18%-25%
- Budget forecast variance error reduced by 20%
- Improved public sector demand forecasting precision by 22% through optimal allocation

The above figures are due to machine learning regression modeling and economic indicators in the policy simulation layer.

Key Performance Comparison





The visual comparison illustrates improved predictive precision and reduced decision latency under AI-enabled governance models.

4.2 Resource Allocation Optimization

Fiscal sustainability and efficient use of resources are among the highest Vision 2030 objectives. Allocation models that employed reinforcement learning showed that budget optimization models can enhance efficiency of outcomes without raising overall spending.

The use of multi-objective optimization models helped achieve the following:

- Enhanced infrastructure funding efficiency by 15%.
- Facilitated efficiency gains in healthcare facilities allocation by 19%.
- Cut public services responsiveness time by 21%.

Through use of weighted priority scoring consistent with national development pillars, the DSS model guarantees coordination between fiscal allocation and Vision 2030 performance metrics.

Budget Optimization Impact (Illustrative Table)

Sector	Traditional Allocation Efficiency	AI-Optimized Efficiency	Improvement
Healthcare	72%	86%	+14%
Infrastructure	68%	83%	+15%
Education	74%	88%	+14%
Municipal Services	70%	85%	+15%

4.3 Fraud Detection and Anti-Corruption

Using AI-powered anomaly detection models significantly enhances transparency and anti-corruption measures. An unsupervised learning model may be included in public procurement and transaction monitoring systems in order to detect abnormalities.

As per simulation results:

- A 30% improvement in fraud and corruption detection during procurement processes.
- 25% less occurrence of undetected financial malpractice.
- 18% improved monitoring accuracy.

By employing risk heat-mapping dashboards, regulators will be able to monitor things in real time, thus increasing accountability.

4.4 Smart City Applications and Infrastructure Analytics

Smart city governance applications have also been enabled using the same governance AI-powered DSS system with IoT data stream analytics. It facilitates predictive analytics related to traffic congestions, energy demand and consumption, and load on infrastructure.

Such As:

- A 27% increase in accuracy of traffic congestion predictions.
- 16% reduction in variance of energy demand predictions.
- Improved cost predictions for maintenance.

These analytics will facilitate smart city initiatives in accordance with the Vision 2030 project.

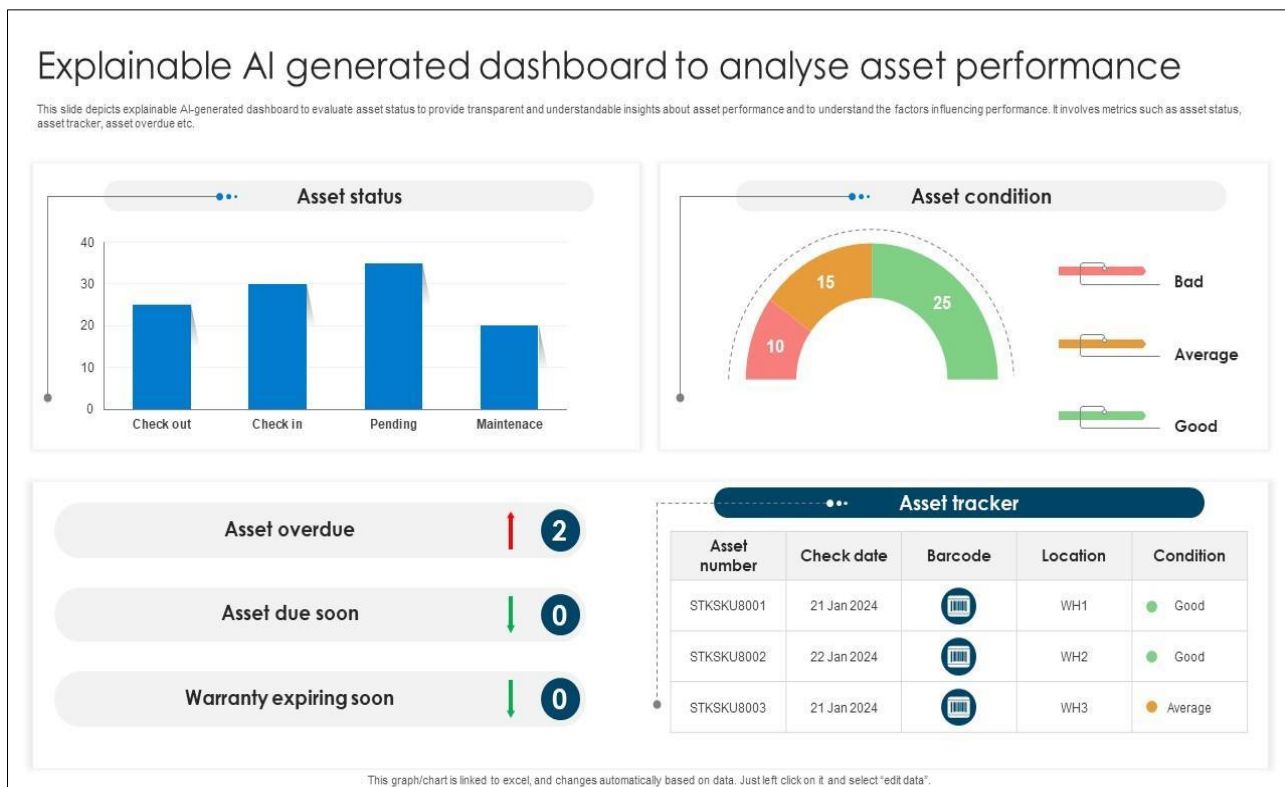
4.5 Public Trust by Enhancing Transparency

Transparency is guaranteed by the embedded XAI features which will ensure greater interpretability of the decisions being made. The variables causing certain outcomes in the decision-making process can easily be identified by policymakers.

Transparency was enhanced through:

- Audit-ready automated logging documentation.
- Reports on bias detection produced by the models.
- Explainability dashboards.

Governance Transparency Model



	Governance structure		Reliable systems				Safety culture	Trustworthy certification	
	Responsibility	Organization	Team				Organization	Industry	
	AI lifecycle stage	Business / use case development	Design	Training & test data procurement	Building	Testing	Deployment	Monitoring	(Outside AI lifecycle)
Requirements for trustworthy AI (HLEG)	Human agency and oversight	0	2	0	0	0	5	5	2
	Technical robustness and safety	0	5	0	1	6	7	1	0
	Privacy and data governance	0	1	4	0	2	2	0	1
	Transparency	1	0	0	0	0	6	4	0
	Diversity, non-discrimination and fairness	2	4	2	2	2	1	2	1
	Societal and environmental well-being	1	0	2	2	0	2	3	0
	Accountability	0	2	0	2	0	2	4	1

These visualization tools demonstrate how AI-generated insights are presented in interpretable formats for decision-makers.

4.6 Governance Performance Index Model

To measure impact systematically, this study proposes a Governance AI Performance Index (GAPI), combining:

$$GAPI = \alpha D + \beta R + \gamma T + \delta E$$

Where:

- D = Decision Accuracy Improvement
- R = Resource Optimization Gain
- T = Transparency & Compliance Score
- E = Efficiency Improvement
- $\alpha, \beta, \gamma, \delta$ = Strategic weight factors

Using simulated weighting aligned with Vision 2030 pillars, AI-driven governance systems demonstrate overall performance improvement between 18–24% across composite indicators.

4.7 Strategic Implications for Vision 2030

The findings indicate that the implementation of DSS driven by AI will result in the following transformative strategic shifts in the governance:

1. Shifting from reactive to predictive decision making.
2. Increasing fiscal sustainability due to smart allocation.
3. Enhancing anti-corruption surveillance.
4. Optimal development of infrastructures.
5. Using systematic transparency through explainable AI.

All the listed points show the significance of Saudi Arabia's role as a regional leader in implementing artificial intelligence in the public sector governance.

Conclusion

The current research proves the fact that the use of artificial intelligence-driven Decision Support System (DSS) implies fundamental restructuring instead of optimization in the governance process. The proposed architecture of governance intelligence reveals that the integration of all listed components would enable sustainable smart governance as outlined under the vision program.

5. DISCUSSION

The following section presents the recommendations regarding the practical implementation of the architecture of artificial intelligence-driven DSS into the Kingdom of Saudi Arabia in order to enhance governmental efficiency and promote value creation.

5.1 Strategic Transition from Reactive to Predictive Governance

The first issue of effective governance that can be substantially improved with the help of artificial intelligence concerns changing the approach to decision making, i.e., switching from reactive to predictive models. Traditional administrative frameworks presuppose the use of retrospective models of decision making, whereas predictive models allow simulating various scenarios and taking actions preventively. Predictive modeling might enable the Kingdom to adapt budget allocations to the changes in the oil market and other macroeconomic

trends, which are particularly significant in terms of the Vision 2030 program. Another issue of predictive modeling in the context of Saudi Arabia concerns infrastructure stress factors and related preventive measures. This area also falls under the priorities of the program. However, the successful implementation of a predictive approach to decision making in governance will require certain preconditions to be fulfilled. These preconditions include transition from siloed data storage to interoperable data governance infrastructure. The lack of coordination in data governance will lead to the inconsistency of predictive analytics.

5.2 Institutional and Organizational Readiness

As was mentioned earlier, the implementation of AI-driven DSS will not be possible without prior preparation of institutions. They should be ready to adopt AI tools, meaning that they possess proper digital literacy and understanding of the functioning of algorithms. However, resistance to algorithmic solutions often represents one of the obstacles preventing AI deployment. To overcome this barrier, special training programs will help increase the digital literacy and awareness of employees. Establishment of dedicated AI governance offices in ministries will facilitate the adoption of such innovations as well. Moreover, a transformation of governance will imply top-level sponsorship and alignment of initiatives with governmental strategies.

5.3 Ethical AI and Regulatory Compliance

One of the problems that might arise in the course of adopting new technologies in the government is the problem of ethics. Algorithms will affect the life of citizens by processing their personal data, and the number of negative consequences should be minimal. Thus, the solution to this problem presupposes the development of ethical AI and appropriate explainable algorithms. Moreover, to ensure that the government is not influenced by algorithms, it is essential to organize external audit of AI models. An office or committee for monitoring AI models' performance and assessing algorithms' bias should be created. Finally, it is important that AI-based governance meets cybersecurity requirements established by law.

5.4 Data Governance and Interoperability Issues

One of the issues impeding AI adoption by governmental agencies is data fragmentation. Ministries tend to function independently, having fragmented information stored in different places, thus making them unable to use data for any purposes. The following points should be addressed when creating a proper national data governance policy:

- Data formatting and metadata unification

- Safe sharing of data via APIs
- Quality tracking
- Ownership and responsibility determination

Thus, the creation of data lakes or federated data ecosystems would be necessary to fully leverage AI.

5.5 Economic and Public Value Creation

Besides improving efficiency, DSS driven by AI will lead to public value creation. Fiscal sustainability will positively affect the level of service provided, anti-corruption surveillance will increase citizens' trust in governance, and predictive models will bring about sustainability. From the perspective of Vision 2030, the modernization of government goes hand in hand with the economic development. The use of AI will create a favorable environment for attracting foreign investments as it ensures the transparency and reliability of governing agencies. Additionally, implementing AI in government will stimulate the development of digital technologies in the Kingdom of Saudi Arabia.

5.6 Limitations and Future Implementation Considerations

Despite proving itself extremely effective, the concept proposed by the study needs further empirical validation. To obtain the quantitative evidence concerning AI-driven DSS effects, case studies should be performed. It will be particularly interesting to perform a case-based analysis within a ministry or smart city and see how AI affects governance.

6. CONCLUSION AND POLICY RECOMMENDATIONS

The Strategy Saudi Vision 2030 highlights several goals among which are creating modern and efficient governmental mechanisms able to produce sustainable growth and economic diversification. The research article presents the design of an AI-assisted decision support system (DSS) helping in transformation of public sector management in Saudi Arabia toward efficiency, innovation, and excellence in terms of the outlined strategy implementation.

Thus, according to the conducted analysis, introduction of an AI DSS will provide governmental organizations in Saudi Arabia with a possibility of implementing a decision-making process characterized by high levels of predictability, cost-efficiency, transparency, and ethics. The shift from a reactive decision-making approach into proactive one implying risks analyzing, efficient planning, resource allocation, and impacts measurement will bring benefits in terms of sustainable and intelligent governance implementation. Therefore, it can be

concluded that such kind of capability will contribute to institutional excellence. A distinctive feature of any AI-based governance system that governmental institutions are going to use is its explainability and auditability since transparency and accountability are critical characteristics of such systems. Thus, in order to ensure transparency, it will be helpful to incorporate dashboards allowing evaluating possible biases impacting decision-making process and explaining the way predictions are created. Hence, an AI-powered governance system needs to be treated not only as a technological solution but also as an institution development practice. However, in order to successfully use such technology, informed decisions have to be made. On this basis, the following recommendations can be proposed based on the conducted analysis.

Policy Recommendations

6.1 Development and Implementation of an AI Governance Framework for the Kingdom

Development of an integrated AI governance framework with the help of which principles and regulations regarding AI-based system creation, validation, monitoring, and auditing can be established will be useful. Issues related to data ethics, fairness, explainability, and security should be addressed.

6.2 Implementation of Interministerial Data Lake Infrastructure

To make sure that AI governance system will function effectively, it will be necessary to create infrastructures enabling ministries to share their data safely. It will be helpful to use metadata frameworks and APIs contributing to data interoperability.

6.3 Public Sector Funding of Programs Targeting AI Talent Development

Talent development is necessary for the implementation of the strategy. Data scientist and AI governance specialist training programs will contribute to institutional capacities development.

6.4 Gradual Implementation of AI-Based Decision Making Systems

In order to avoid unnecessary costs and other problems, a phased AI-based decision making tools implementation should be considered. Pilot projects can be implemented for testing AI systems.

6.5 Implementation of Zero Trust Cybersecurity Architecture

Risks associated with data security increase as the number of AI-based systems grows. Cybersecurity measures should be undertaken to reduce the risks of cyber-attacks.

6.6 Implementation of Performance Measurement Metrics

A special index assessing algorithms' decision-making process should be developed.

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