Inter-Parliamentary Union
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Maturity Framework for AI in Parliaments

A toolkit for parliamentarians

Acknowledgements

The *Maturity Framework for AI in Parliaments* has been developed by the IPU's Centre for Innovation in Parliament (CIP). It was written by Dr. Andy Williamson with the support and assistance of Andy Richardson and Avinash Bikha.

The Framework was initially discussed during a meeting of the CIP Parliamentary Data Science Hub, hosted by the Senate of the Netherlands, in June 2025. We are grateful to all members of the Hub for their support and guidance, and we acknowledge in particular the contributions of the Shura Council of Bahrain, the Chamber of Deputies of Brazil, the House of Commons of Canada, the UK Parliament and the National Assembly of Zambia.

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Implemented by International IDEA

This publication has been produced with the financial support of the European Union (EU), in partnership with the International Institute for Democracy and Electoral Assistance (International IDEA), as part of INTER PARES | Parliaments in Partnership, the EU's Global Project to Strengthen the Capacity of Parliaments.

ISBN (print) 978-92-9142-942-4, ISBN (digital) 978-92-9142-943-1

Design and layout: René Berzia, Inkdrop

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Foreword

Artificial intelligence (AI) is transforming our world at an unprecedented pace, reshaping economies, societies and democratic governance itself. At the 149th Inter-Parliamentary Union (IPU) Assembly, held in October 2024, Member Parliaments adopted the landmark resolution *The impact of artificial intelligence on democracy, human rights and the rule of law*, which called on parliaments worldwide to develop robust frameworks for the responsible deployment of AI.

Parliaments cannot afford to fall behind as society embraces these new technologies. The future quality of democracy and its institutions is at stake. Yet introducing AI-enabled parliamentary operations can be a complex and resource-intensive task – and, if not managed well, can even be counterproductive. Each parliament faces unique circumstances: different constitutional frameworks, varying levels of digital maturity and distinct resource constraints. There is no single path forward, but there is a growing need for structured guidance.

This *Maturity Framework for AI in Parliaments* addresses that very need. Developed by the IPU's Centre for Innovation in Parliament (CIP) with invaluable support from a wide range of parliaments, it serves as a practical tool to help parliaments understand where they are in their AI journey and plan ahead with confidence. It is intended to be used in conjunction with the IPU *Guidelines for AI in parliaments* to support parliaments in harnessing the benefits of AI and maintaining democratic accountability, transparency and public trust.

The Framework recognizes that excellence in AI adoption comes in many forms. Not every parliament needs to reach the highest levels of maturity in all areas. What matters is thoughtful, context-appropriate implementation that enhances parliaments' democratic mission while ensuring risks are managed responsibly.

The IPU remains committed to supporting those parliaments navigating the opportunities and challenges of AI. I thank all those who contributed to this Framework, especially members of the CIP Parliamentary Data Science Hub. I invite parliaments to avail themselves of this resource and to join us in building a future where parliaments harness the potential of AI for the benefit of all.

Martin Chungong
Secretary General
Inter-Parliamentary Union

About this Framework

The *Maturity Framework for AI in Parliaments* has been developed to help parliaments adopt AI – and Generative AI (GenAI) tools in particular – with confidence and control, supporting them in connecting and managing a diverse range of complex projects. It is also intended to be used as a tool for communicating AI readiness and strategy across senior management.

This Framework is designed to support all parliaments, regardless of their size, digital maturity or level of AI adoption. It is aimed at individuals and groups in parliament who regulate, plan or strategically manage AI. It will help parliamentary leadership and senior ICT staff understand where their parliament is in terms of AI maturity and assist them in planning for the future.

The Framework spans six levels of AI maturity and has been designed as a diagnostic and planning tool, not as a prescriptive standard that all parliaments must achieve uniformly. It offers:

- A clear progression pathway through all levels
- Practical focus areas that parliaments can implement
- Balanced coverage across four areas: governance, technical capability, organizational capability and democratic impact
- Realistic expectations for different maturity stages
- Strong integration with the IPU *Guidelines on AI in parliaments* and the *Guide to digital transformation in parliaments* produced by the IPU and the Association of Secretaries General of Parliaments (ASGP)

The Framework is designed to be a flexible tool that is:

- **Adaptable** across different parliamentary sizes, systems and contexts
- **Scalable** from individual projects to institution-wide transformation
- **Practical**, with clear guidance for both business and technical users
- **Democratic**, ensuring AI enhances parliamentary functions

The six levels of AI maturity

The six levels of AI maturity in this Framework are detailed below:

Table 1 – The six levels of AI maturity

Level 0: Ad hoc	No governance or strategy; AI tools (particularly GenAI) used informally by a few individuals
Level 1: Initial	Basic awareness; emerging awareness of the need for rules and strategies
Level 2: Emerging	Pilot projects; capacity-building; learning; initial governance
Level 3: Implementation	Systematic deployment; established practices; formalized governance processes
Level 4: Integration	AI embedded across parliamentary functions
Level 5: Leadership	Advanced practice; global standard-setting

These levels are described in detail in the sections that follow.

To determine each level, the Framework focuses on **three internal development areas** that are considered essential for the effective use of AI in parliaments, plus a **fourth area** that builds on the first three and serves as the link between AI use and the democratic functioning and contribution of parliaments:

1. **Governance:** Internal frameworks, policies and oversight mechanisms that parliaments establish to ensure responsible AI use, including risk management, ethical guidelines, accountability structures and compliance monitoring.

2. **Technical capability:** The infrastructure, systems, and data-management and security measures needed to successfully implement and operate AI tools within the parliamentary environment.

3. **Organizational capability:** The human elements needed to support AI adoption, including leadership commitment, staff skills and literacy, change-management processes, training programmes and institutional culture.

4. **Democratic impact:** The effects of AI implementation on parliamentary functions, citizen engagement, transparency, accountability, and the preservation or enhancement of democratic values and processes.

Real-world AI adoption in parliaments is inherently complex and context-dependent, requiring a nuanced understanding of institutional development. Just as a parliament's overarching digital strategy develops across several interconnected areas, so does the institution's AI maturity. As a parliament advances in these areas, it demonstrates successful and responsible implementation of AI, moving from the initial foundations through to innovation leadership.

The levels are not a rigid, linear pathway that must be followed uniformly across all areas. For example, a parliament may achieve Level 2 in governance while still operating at Level 1 in technical capability. Likewise, it may have advanced technical implementations at Level 4 while its governance frameworks remain at Level 2.

While parliaments will progress at different speeds based on their priorities and resources, sustained development across all four areas is essential for achieving meaningful AI maturity.

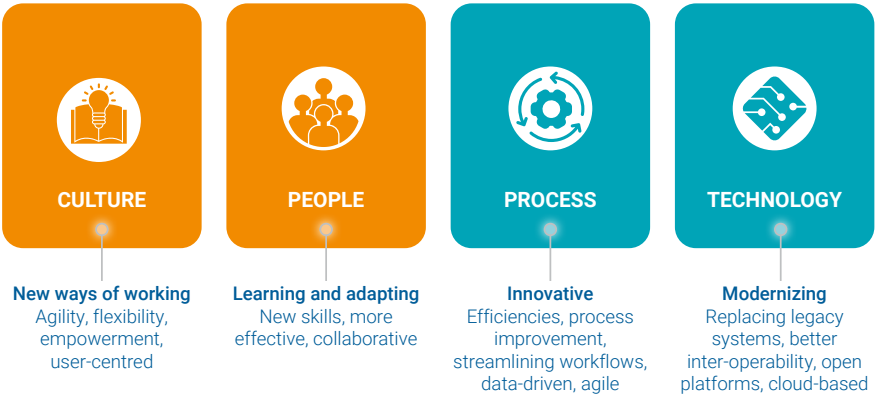
Table 2 – Summary of the Framework

	Area			
Level	**Governance**	**Technical capability**	**Organizational capability**	**Democratic impact**
Level 0 Ad hoc	No governance or policies in place	No support but some ad hoc use, particularly of GenAI tools	Not considered	Not considered
Level 1 Initial	Basic governance structure; initial policies	Infrastructure assessment; basic data governance	Foundational awareness; basic training	Consideration of basic democratic values
Level 2 Emerging	Comprehensive ethical framework; systematic risk management	Pilot implementations; security protocols	Role-specific expertise; champions network	Controlled enhancement of administrative functions
Level 3 Implementation	Enforcement mechanisms; transparent reporting	Scaled deployment; custom solutions	Cross-functional competency; change management	Improved citizen engagement; legislative support
Level 4 Integration	Adaptive governance; real-time monitoring	Advanced integration; predictive capabilities	Embedded expertise; innovation culture	Enhanced decision-making; institutional effectiveness
Level 5 Leadership	Anticipatory frameworks; global standard-setting	Emerging technology adoption; autonomous systems	Research capability; thought leadership	Democratic innovation; global influence

The digital transformation journey

This Framework recognizes that adoption of AI by parliament – as with any digital transformation process – is not just about technology, and that culture, people and processes are equally important.

Figure 1 – Areas of impact for a digital transformation programme



Source: IPU/ASGP *Guide to digital transformation in parliaments*

The following IPU resources, which are recommended to be read alongside this Framework, are designed to support parliaments in their digital transformation journeys:

- The IPU/ASGP *Guide to digital transformation in parliaments* explores the role and requirements of leadership, and examines internal and external challenges and risks, as well as potential points of failure.
- The IPU *Guidelines for AI in parliaments* provide practical guidance on the importance of a strategic approach, strong governance, ethical considerations and risk management. They underscore the importance of using AI to augment and enhance human capability rather than replace it, especially in democratic deliberation and decision-making.
- The *Use cases for AI in parliaments*, developed by parliaments and compiled and published by the IPU, offer practical suggestions as to how AI can be used.

Using the Framework

By providing a structured approach to the complex challenge of AI, this Framework helps parliaments harness the benefits of AI while safeguarding the democratic processes they serve and ensuring effective internal governance.

Parliaments can only use this Framework effectively if a conducive environment is in place. The considerations and recommendations below are intended to support the creation of such an environment.

Acknowledging and preparing for the tasks ahead

Parliaments should understand how they will:

1. **Assess and plan**: Evaluate current maturity and develop implementation road maps.
2. **Monitor progress**: Regularly track development and inform resource-allocation decisions.
3. **Communicate strategically**: Provide a common language for stakeholder discussions throughout the life cycle of AI use in parliament.

Making connections

This Framework complements national AI strategies, international standards and sector-specific guidelines. Parliaments are therefore invited to:

- Use it as a bridge between general AI principles and parliament-specific implementation, actively engaging with external standards that align with their jurisdiction.
- Begin with an honest evaluation of their current position, then focus development efforts where AI delivers the greatest value to core functions.
- Build on existing strengths rather than addressing all gaps simultaneously.
- Treat the framework as a living tool, regularly reassessing their position and learning from other parliaments while maintaining their unique approach.

Acknowledging each parliament's unique situation and prioritizing

It is important to remember that each parliament's maturity journey reflects its unique circumstances, including:

- Constitutional and legal frameworks
- Available resources and budget constraints
- Existing digital infrastructure
- Organizational culture and change readiness
- Political priorities and stakeholder expectations
- The size and complexity of parliamentary functions

Rather than pursuing uniform advancement across all areas, parliaments are encouraged to prioritize development based on their strategic objectives, immediate needs and available capabilities.

Each parliament defines its own approach based on its unique institutional context. Advancing to the next level of maturity is not about meeting every specific criterion in this Framework. Rather, it calls for a general assessment of parliament's current position and standing across the four areas: governance, technical capability, organizational capability and democratic impact.

Assessing parliament's AI maturity

Although this Framework is not a formal assessment tool, it provides a structured set of criteria that parliaments can use to review their AI use, understand how they are performing across the four development areas, and measure their position against the levels of maturity. It can therefore help substantiate a more comprehensive assessment approach that combines strategic insight with measurable indicators.

Parliaments may find it useful to assess their maturity separately for each of the four development areas rather than seeking a single overall level. This pillar-by-pillar approach can help identify specific strengths and gaps and support parliaments in making informed decisions about AI development priorities and resource allocation.

As every parliament's AI journey is unique, each institution will need to develop assessments based on its unique circumstances. The sample questions below help identify what to assess, while the sample metrics provide practical guidance on measuring and tracking these capabilities.

Sample assessment questions

The following sample assessment questions provide a starting point for developing a qualitative understanding of your parliament's AI maturity across the four development areas set out in this Framework, as well as for tracking progress in these areas:

Governance

- How comprehensive are AI policies and how are they implemented?
- What level of risk management occurs?
- What formal oversight and accountability mechanisms are in place for AI?
- How effective is stakeholder engagement?

Technical capability

- What is the level of infrastructure and architecture maturity, and is it AI-ready?
- How is systems integration managed?
- What practices and processes are in place to ensure data quality and governance?
- What security and compliance measures are in place?

Organizational capability

- What leadership commitment is there to AI?
- What vision is there for using AI?
- What are the skills and literacy levels across parliament and how are these being developed?
- Is an effective change management process in place?
- Does parliament have a culture of innovation?

Democratic impact

- How can AI enhance parliamentary functions?
- What are potential opportunities to improve citizen engagement?
- What processes are in place to ensure the transparency and accountability of AI?
- How does the use of AI preserve or enhance democratic values?

Sample metrics

To complement this qualitative assessment and track progress over time, parliaments should also develop their own quantitative and qualitative metrics that can be measured and monitored regularly. Some sample metrics are provided below:

Quantitative metrics	Qualitative metrics
• Number of AI applications operational • Staff AI literacy assessment scores • System performance and reliability metrics • Cost-benefit ratios of AI implementations	• Stakeholder satisfaction and trust levels • Evidence of democratic process enhancement • Recognition and reputation measures • Knowledge-sharing and influence metrics

The six levels of AI maturity

The sections that follow explore and expand upon the six levels of maturity. For each level (from 0 to 5), the Framework explains the following aspects:

- **Core characteristics**: Descriptors of the criteria for each area at each level
- **Key focus areas for progression**: Options for progressing through this level to reach the next level, i.e. things that a parliament at this level of maturity would be working on
- **Success indicators**: Where parliament is aiming to get to, so it can say that it is operating effectively at the current level and is now ready to move on to the next level of maturity
- **Preparing for the next level**: Forward-looking questions that a parliament should be asking itself as its maturity advances

The six levels of AI maturity in the Maturity Framework are described on page 6 above. While exploring the maturity levels, please keep the following considerations in mind:

- This Framework is a tool to support understanding and planning; it is not prescriptive.
- Parliaments can be at different levels in different areas.
- The IPU's *Guidelines for AI in parliaments* are relevant at all levels of maturity.

Level 0: Ad hoc

Parliament has no formal policies or procedures in place. Some users may be adopting AI-based tools, particularly GenAI, in their own work, and awareness of AI within the institution is increasing.

Core characteristics

Governance

- AI is not formally recognized, and there are no regulations or processes in place.
- No governance structures have been considered.

Technical capability

- There are initial signs of individual (ad hoc) early adopters.
- Some informal experimentation with GenAI tools by individual users occurs.

Organizational capability

- No formal awareness or training programmes are in place.
- AI adoption is entirely informal and unrecognized by institutional leadership.
- There are no designated roles or responsibilities for AI oversight.
- Individuals explore tools without organizational support or guidance.

Democratic impact

- This aspect is not considered: no assessment of the impact of AI on parliamentary functions has been conducted.
- No links are made between ad hoc tool use and democratic outcomes.
- Potential risks to parliamentary processes have not been identified.

Level 0: Ad hoc

Key focus areas for progression

Governance and strategy
- Emerging early recognition that procedures will be required.

Assessment and planning
- None

Capacity-building
- There is some ad hoc experimentation and early adoption among MPs and staff, particularly of GenAI tools.
- Institutional recognition of these practices is absent and no formal training is provided.

Compliance and alignment
- None

Success indicators

- Informal AI use is recognized.
- There is an institutional requirement to develop a more formal approach to AI.

Preparing for the next level

Leadership conversations
- Are senior leaders aware of informal AI use and ready to discuss a coordinated approach?

Stakeholder identification
- Who should be involved in early AI discussions?
- Which committees, departments or individuals have relevant expertise or authority?

Learning and awareness
- What does your parliament understand about AI capabilities, risks and governance?
- Would awareness sessions help build shared understanding?

Resource assessment
- Can your parliament dedicate staff time and budget to exploring AI systematically?

Current state of play
- What AI tools are already in use, and what can be learned from these experiences?

Level 1: Initial

Parliament is getting started with AI, building awareness and establishing basic governance structures.

Core characteristics

Governance

- AI is recognized as a potential tool for parliamentary improvement.
- Basic governance structures are established or being planned.

Technical capability

- An initial assessment of readiness and opportunities has been completed.

Organizational capability

- Foundational skills and awareness programmes have been initiated.
- Users are starting to explore and experiment with GenAI tools within parliament.

Democratic impact

- Parliament has embarked on an initial consideration of basic democratic values (transparency, accountability) in AI use.
- Parliament is aware that AI decisions may affect parliamentary transparency and public trust.
- Parliament recognizes that democratic safeguards must be built into any AI implementation.
- Basic frameworks are being established to ensure that AI supports rather than undermines democratic processes.

Level 1: Initial

Key focus areas for progression

Governance and strategy

- **AI governance structure:** Establish a basic governance framework with clear roles, through either existing committees or a new AI-focused body.
- **Initial policy development:** Create a foundational AI policy covering basic ethics, transparency and accountability principles.
- **Stakeholder mapping:** Identify key internal and external stakeholders including MPs, staff, citizens and technology partners.
- **Vision and strategy:** Define preliminary AI ambitions, aligning these with strategic and business objectives, and with democratic values.

Assessment and planning

- **Readiness assessment:** Evaluate current infrastructure, data sources, digital literacy and organizational culture, using structured tools.
- **Opportunity identification:** Map potential AI use cases, focusing on administrative and support functions.
- **Risk identification:** Start developing an AI risk-assessment process and build awareness of the risks involved in AI adoption.
- **Humans in the loop:** Start considering how humans will remain in the loop for all AI-supported processes to ensure oversight and accountability.
- **Resource planning:** Start assessing budget, skills and infrastructure requirements but recognize that this will be high-level.

Capacity-building

- **Baseline assessment:** Evaluate current data literacy and AI literacy across the institution.
- **Foundational training:** Provide basic AI education covering concepts, opportunities and risks for different parliamentary roles.
- **Infrastructure review:** Assess existing IT systems, data-management capabilities and security measures.
- **Partnership development:** Begin engaging with academic institutions, technology providers and other parliaments.

Compliance and alignment

- **Framework research:** Identify relevant national and international AI standards and regulations.
- **Legal compliance:** Assess how existing laws impact AI implementation in a parliamentary context.
- **Democratic alignment:** Ensure AI initiatives complement existing parliamentary procedures and democratic principles.

Level 1: Initial

Success indicators

- A basic AI governance structure has been established.
- An initial AI policy is being developed.
- An initial AI strategy is being developed, with a clear road map and governance requirements.
- A readiness assessment has been completed.
- Foundational training has been delivered to key staff.
- A risk register has been created and is maintained.
- Compliance requirements have been identified.

Preparing for the next level

Policy formalization readiness

- Are your ethical principles sufficiently clear to guide pilot projects and evaluate specific AI initiatives?

Pilot project identification

- Which low-risk, high-value use cases could serve as effective learning opportunities?

Skills gap analysis

- Do you have the technical and governance expertise to oversee pilots safely, or are training, hiring or partnerships needed?

Risk management maturity

- Is your framework well-developed enough that you can conduct systematic risk assessments for specific applications?

Data governance foundations

- Is your data ready?
- Do you understand what data would be needed for pilots?
- Do you know whether this data meets quality, privacy and security standards?

Budget and procurement planning

- Have you identified costs and ensured procurement processes can evaluate AI vendors effectively?

Level 2: Emerging

Parliament is learning through doing, running pilots and undertaking capacity-building.

Core characteristics

Governance

- An AI policy covering ethical principles is being implemented.
- Technical capability.
- Systematic pilot projects are under way, with clear learning objectives.
- Targeted skills development programmes have been implemented and parliament is developing role-specific expertise.
- Technology exploration is happening in controlled environments.

Organizational capability

- AI champions are emerging and subject-matter experts have been identified across key departments.
- Role-specific training programmes have been developed for MPs, staff and technical teams.
- A culture shift towards systematic experimentation and learning is in its early stages.
- Parliament is beginning to integrate AI literacy into its organizational practice.

Democratic impact

- Managed enhancement of administrative functions has begun.
- There has been an initial assessment of how pilot applications might improve citizens' access to parliamentary information.
- Mechanisms have been introduced to monitor and evaluate the democratic impact of pilot projects.
- Transparent reporting on pilot AI use is beginning to be considered.
- Risks to democratic processes are being systematically identified through pilot evaluation.

Level 2: Emerging

Key focus areas for progression

Pilot implementation

- **Portfolio management:** Establish a systematic approach using methodologies like Segmentation, Transition, Education and Performance (STEP).
- **Low-risk applications:** Start with administrative tasks (document management, scheduling and basic research assistance).
- **Controlled testing:** Implement AI tools in sandbox environments with robust human oversight.
- **Off-the-shelf versus developed solutions:** Keep in mind that both pathways are valid and may include legacy-system integration.
- **Iterative development:** Focus on agile, iterative growth and minimum viable product (MVP).

Enhanced governance

- **Comprehensive policies:** Develop detailed policies covering all eight ethical principles (privacy, transparency, accountability, fairness and non-discrimination, robustness and safety, human autonomy and oversight, societal and environmental well-being, and intellectual property).
- **Risk management:** Implement systematic risk assessment using structured questionnaires and evaluation frameworks.
- **Oversight mechanisms:** Establish monitoring and review processes for AI applications.
- **Vendor management:** Create evaluation frameworks that distinguish genuine AI capability from marketing positioning.

Skills development and capacity-building

- **Role-specific training:** Provide targeted AI literacy programmes for MPs, staff and technical teams.
- **Data literacy programmes:** Implement comprehensive data literacy training as a prerequisite for AI readiness.
- **Champions network:** Develop internal AI advocates and subject-matter experts.
- **External partnerships:** Engage with universities, think tanks and technology providers for expertise and proof-of-concept work.

Technology and security

- **AI tool evaluation:** Test various AI applications, with a focus on transparency and explainability.
- **Data governance:** Establish data ownership, stewardship roles and quality management processes.
- **Security implementation:** Deploy AI-specific cybersecurity measures, including threat-assessment and protection protocols.
- **Architecture planning:** Assess requirements for integration with existing parliamentary systems.

Level 2: Emerging

Success indicators

- Multiple pilot projects have been successfully completed.
- A comprehensive AI ethics policy has been implemented.
- Staff AI literacy has measurably improved.
- A data governance framework is operational.
- Security protocols for AI have been established.
- Parliament's vendor evaluation process has proven effective.

Preparing for the next level

Lessons learned

- What have pilots revealed about the value, limitations and risks of AI?
- Are insights being systematically captured and used to refine strategy?

Scaling readiness

- Which pilots have demonstrated sufficient value and safety to warrant broader deployment?
- What additional governance frameworks or infrastructure would scaling require?

Organizational culture assessment

- Is your parliament developing change-management capabilities for widespread adoption?
- Are staff ready to embrace AI-enabled workflows?

Governance maturation

- Are oversight mechanisms effective in managing pilots?
- Do enforcement, transparency and accountability structures need to be strengthened before scaling?

Technical infrastructure evaluation

- Does your IT architecture support more integrated AI applications or are infrastructure investments needed?

Evidence of democratic impact

- Can you articulate and measure how AI enhances democratic processes beyond administrative efficiency?

Level 3: Implementation

Parliament is scaling AI successfully, with systematic deployment of the technology.

Core characteristics

Governance

- Ethical principles are embedded in the AI project life cycle, in working processes that use AI, and in decision-making.

Technical capability

- Successful pilots are scaled up to operational status, with AI deployed in high-impact parliamentary functions.
- Custom parliamentary solutions have been developed or procured.

Organizational capability

- Subject-matter expertise is embedded across key departments.
- Training and competency are scaled organization-wide, with formal change-management processes supporting systematic deployment.
- Organizational structures and dedicated roles have been established for AI oversight.
- New use cases are proactively identified through staff culture and processes, and learning is systematically captured and applied across the organization.

Democratic impact

- Citizen engagement is improved through enhanced access to parliamentary information and legislative processes.
- Legislative support functions are enhanced.
- Transparent reporting on AI use and its effects on parliamentary functions is established.
- There are measurable improvements in how parliament serves citizens while maintaining democratic accountability.
- Post-legislative scrutiny and policy analysis are supported by AI-driven insights.
- Public trust is maintained through clear communication about the role of AI in parliamentary processes.

Level 3: Implementation

Key focus areas for progression

Systematic deployment

- **Project review board:** Solicit and capture cross-functional input to ensure alignment with AI policy and strategy.
- **Strategic applications:** Implement AI in legislative research, constituent services and policy analysis, based on strategic priorities.
- **Portfolio scaling:** Move successful pilots to operational status with proper change management.
- **Performance measurement:** Establish key performance indicators and success metrics aligned with parliamentary goals.
- **Custom solutions:** Develop or procure AI tools specifically designed for parliamentary functions.

Advanced governance

- **Policy enforcement:** Implement complete AI policies with enforcement mechanisms and accountability structures.
- **Audit capabilities**: Develop internal capacity for algorithmic auditing and performance monitoring.
- **Transparent reporting:** Produce regular public reports on AI use and outcomes, with clear communication strategies.
- **Advanced risk management:** Establish sophisticated risk assessment and mitigation measures across the full AI life cycle

Enhanced capabilities

- **Multimodal AI**: Deploy advanced applications including speech recognition, image analysis and natural language processing.
- **Data integration:** Create unified data platforms to support AI applications, with robust governance to ensure data integrity.
- **Workflow integration:** Embed AI tools into daily parliamentary operations and decision-support systems.
- **Quality assurance:** Implement comprehensive testing, validation and quality-control processes.

Democratic enhancement

- **Citizen engagement:** Use AI to improve public participation and access to parliamentary information.
- **Legislative support:** Deploy AI for bill analysis, amendment mapping and post-legislative scrutiny.
- **Inter-parliamentary cooperation:** Actively participate in parliamentary AI networks and knowledge-sharing initiatives.

Level 3: Implementation

Success indicators

- AI is operational in multiple high-impact areas.
- Public reporting on AI use has been established.
- Custom parliamentary AI solutions have been deployed.
- Measurable improvements in parliamentary efficiency have been observed.
- Parliament has a strong reputation for responsible AI use.
- Parliament plays a leadership role in inter-parliamentary AI networks.

Preparing for the next level

Cross-functional integration planning

- What organizational or workflow changes would make AI a natural part of parliamentary functions?

Governance adaptations

- Are your AI policies and oversight mechanisms adapting to growing experience and the changing AI landscape?

Advanced capability needs

- What predictive, analytical or decision-support capabilities might strengthen legislative, oversight or engagement functions?

Innovation culture assessment

- Do staff feel empowered to propose AI innovations?
- Do processes exist to evaluate and implement promising ideas?

Knowledge management systems

- Is AI-related learning being captured and shared across departments, or is expertise concentrated in a few individuals?

Leadership positioning

- Are your practices, reporting and outcomes mature enough to be shared with other institutions and to contribute to broader democratic AI discourse?

Level 4: Integration

Parliament is embedding excellence, and AI is established as an institutional capability.

Core characteristics

Governance

- Human-in-the-loop oversight is continuously enhanced, especially for high-impact or sensitive decisions.
- Adaptive governance frameworks evolve with technology advances and operational experience.
- AI system performance and compliance are monitored in real time.
- Clear responsibility structures are in place for all AI decisions and outcomes.
- Algorithmic auditing capabilities have been established for systematic assessment of AI system fairness and accuracy.

Technical capability

- AI is naturally integrated into daily parliamentary operations across major functions.
- Advanced decision-support and predictive capabilities are operational.
- AI is integrated in a sophisticated manner with existing systems and embedded seamlessly in workflows.
- Predictive analytical capabilities support complex legislative analysis.
- Continuous quality assurance and automated anomaly detection are in place.
- Systems are proactively optimized based on operational feedback and emerging best practices.

Organizational capability

- Cross-functional AI expertise is embedded throughout the organization.
- The institution is recognized as an AI exemplar, with a staff culture of innovation and responsible experimentation.
- Knowledge management systems capture and share AI-related learning and good practices.
- Continuous professional development is integrated into organizational practice.
- Staff are empowered to propose and evaluate AI innovations.
- Optimized human–AI collaboration processes exist across all relevant functions.

Democratic impact

- Enhanced decision-making and institutional effectiveness are the norm across parliamentary functions.
- Democratic processes are strengthened through AI-supported legislative drafting, impact assessment and scrutiny.
- Citizen engagement is significantly improved through accessible, responsive, AI-enhanced parliamentary services.
- Scenario-planning and policy-modelling capabilities strengthen parliament's ability to evaluate legislative options.
- Democratic values are actively safeguarded through continuous monitoring and transparent reporting on AI outcomes.
- Parliament is recognized internally and externally as a model for responsible democratic AI use.

Level 4: Integration

Key focus areas for progression

Institutional embedding

- Workflow integration: Make AI a natural part of operations across all parliamentary functions.
- Advanced decision support: Use AI systems to support complex policy analysis, legislative drafting and impact assessment.
- Predictive capabilities: Use AI for scenario planning, policy modelling and legislative outcome prediction.
- Continuous innovation: Encourage staff to proactively identify new AI applications and improvements.

Mature governance

- **Algorithmic auditing:** Regularly and systematically assess the fairness, accuracy and democratic impact of AI systems.
- **Real-time monitoring:** Ensure continuous oversight with automated anomaly detection and quality control.
- **Adaptive policies:** Establish dynamic frameworks that evolve with technology advances and operational experience.
- **Comprehensive accountability:** Put in place clear responsibility structures for all AI decisions and outcomes.

Excellence in practice

- **Cross-functional integration:** Foster seamless collaboration between technical and parliamentary experts.
- **Knowledge management:** Systematically capture and share AI-related learning and good practices.
- **Human–AI collaboration:** Strike an optimized balanc e between AI capabilities and human oversight.
- **Innovation culture:** Make an institutional commitment to responsible experimentation and improvement.

Leadership and influence

- **Sector expert:** Establish parliament as model for others to learn from through collaboration and knowledge-sharing.
- **International recognition:** Become a recognized leader in democratic AI adoption.
- **Research contribution:** Actively participate in academic and policy research on AI in democratic institutions.
- **Standard-setting**: Contribute to the development of parliamentary AI standards and frameworks.

Level 4: Integration

Success indicators

- AI is seamlessly integrated across all relevant major functions.
- Parliament is recognized as model by other institutions.
- Parliament contributes to international AI standards.
- Democratic processes are demonstrably enhanced.
- Advanced predictive and analytical capabilities are operational.
- A comprehensive knowledge management system for AI has been established.

Preparing for the next level

Emerging technology horizon scanning
- Is your parliament systematically monitoring next-generation AI capabilities?
- Do you have the research capacity and risk appetite for early adoption?

Global contribution readiness
- What unique insights, frameworks or practices could benefit the international parliamentary community?
- Are your experiences documented in shareable ways?

Research and thought-leadership capacity
- Can your parliament contribute to academic and policy research on AI in democratic institutions through partnerships with universities or international organizations?

Participation in standard-setting
- Are you positioned to contribute to the development of international standards?
- Do staff have the expertise, time and support to engage in global processes?

Anticipatory governance development
- Are your governance frameworks flexible enough to address AI technologies that do not yet exist while maintaining democratic safeguards?

Level 5: Leadership

Parliament is pioneering the future and is positioned as a global leader in parliamentary AI.

Core characteristics

Governance

- Parliament's anticipatory governance frameworks are capable of addressing emerging technologies while maintaining democratic safeguards.
- Parliament participates in global standard-setting and contributes to international norms on ethical AI use.
- Frameworks have been established for evaluating and managing AI technologies that do not yet exist.
- Parliament provides thought leadership in ethical AI governance for democratic institutions.
- Systematic horizon scanning and emerging technology assessment are embedded in governance processes.

Technical capability

- Parliament is an early adopter of emerging AI technologies and capabilities as they develop.
- Autonomous systems are carefully deployed, with robust oversight mechanisms.
- Cross-domain innovation occurs widely, with advanced integration spanning multiple parliamentary functions.
- Next-generation development approaches pioneer new applications.
- Flexible, adaptive architecture accommodates future AI capabilities and changing requirements.
- Cutting-edge applications support democratic innovation.

Organizational capability

- Parliament has established research and development capabilities and contributes to academic and policy research on AI in democratic institutions.
- Parliament's thought leadership is recognized globally, with the institution serving as model for others to learn from.
- A continuous learning culture is in place, with staff positioned as experts and innovators.
- Parliament actively provides capacity-building and mentoring for other legislatures in their AI development journeys.
- Next-generation capabilities are systematically identified, tested and deployed through parliament's innovation pipeline.
- Parliament has made an institutional commitment to responsible experimentation and continuous improvement.

Democratic impact

- Parliament uses advanced AI responsibly to support democratic innovation and enhancement.
- Parliament influences how AI shapes democratic processes and institutions globally.
- Parliament serves as a thought leader, contributing to worldwide discourse on AI in democracy.
- Parliament systemically contributes to the development and adaptation of democratic processes through responsible AI adoption.
- Advanced analytical capabilities enhance representation and legislative effectiveness.
- Citizen participation and engagement are fundamentally transformed by parliament's innovative AI applications.
- Parliament sets benchmarks for democratic values in AI use, influencing international practice and standards.

Level 5: Leadership

Key focus areas to maintain level

Leading-edge applications

- **Emerging technology integration:** Adopt new AI capabilities early, as they develop.
- **Cross-domain innovation**: Deploy AI applications spanning multiple functions, with advanced integration.
- **Autonomous systems:** Carefully manage the deployment of autonomous AI, with robust oversight.
- **Democratic innovation**: Use AI to enhance democratic participation, representation and governance.

Global leadership

- **International standard-setting:** Serve as a leading contributor to global standards for AI in democratic institutions.
- **Knowledge-sharing:** Regularly publish research, frameworks and case studies.
- **Capacity-building:** Support other parliaments through partnerships and programmes.
- **Research leadership:** Conduct pioneering research on the role of AI in democratic governance.

Continuous development

- **Future readiness**: Conduct systematic horizon scanning and emerging technology assessment.
- **Adaptive architecture:** Ensure flexible systems accommodate new AI capabilities and changing requirements.
- **Ethical leadership:** Set global standards for ethical AI use in democratic institutions.
- **Innovation pipeline:** Adopt a systematic approach to identifying, testing and deploying next-generation capabilities.

Transformational impact

- **Anticipatory governance:** Establish frameworks for evaluating and managing emerging technologies.
- **Global influence:** Shape international discourse on AI in democracy.
- **Thought leadership:** Position parliament as a recognized global authority on democratic AI implementation.
- **Systemic change:** Contribute to the development and adaptation of democratic processes through responsible AI adoption.

Success indicators

- Parliament is a regular early adopter of emerging AI technologies.
- Parliament plays a leading role in the development of international standards.
- Parliament supports multiple other legislatures in their AI development journeys.
- Parliament publishes research which is cited globally.
- Anticipatory governance frameworks are operational.
- Parliament is recognized as a thought leader in democratic AI.

Cross-references between this Framework and the *Guidelines for AI in parliaments*

The IPU *Guidelines for AI in parliaments* provide comprehensive, practical guidance to help parliaments responsibly adopt and implement AI. Developed collaboratively by parliamentary staff and experts, the Guidelines cover essential areas including strategic governance, risk management, ethical principles, data-literacy training and technical implementation.

The Guidelines offer both high-level strategic advice for parliamentary leaders and detailed operational guidance for technical staff, addressing everything from establishing AI governance structures to managing security risks and ensuring human oversight. They serve as a foundational resource that parliaments can adapt to their specific contexts, cultures and capabilities, supporting their journey towards effective and ethical AI adoption.

The Guidelines are organized around three main areas:

- Key concepts
  - ↘ The role of AI in parliaments
  - ↘ Risks and challenges for parliaments
  - ↘ Alignment with national and international AI frameworks and standards
  - ↘ Inter-parliamentary cooperation for AI

- Strategy
  - ↘ Strategic actions towards AI governance
  - ↘ Generic risks and biases
  - ↘ Ethical principles
  - ↘ Introducing AI applications
  - ↘ Training for data literacy and AI literacy
- Planning and implementation
  - ↘ Project portfolio management
  - ↘ Data governance
  - ↘ Security management
  - ↘ Risk management
  - ↘ Systems development

To use this section, you should be familiar with, and have access to, the Guidelines.

Translating the Guidelines into practice

The cross-reference matrix below demonstrates how the Guidelines translate into practice across the levels of maturity set out in this Framework, effectively creating a road map where each (sub-)guideline evolves in scope and sophistication as parliaments progress through their AI journey.

A key insight from the matrix presented in Table 3 (below) is that the Guidelines are not prescriptive in sequence but rather scalable in implementation. All areas of the Guidelines – from strategic actions through to alignment with standards – apply at every level of maturity, but with increasing organizational embeddedness and sophistication. What distinguishes levels of maturity is not which (sub-)guideline(s) apply, but rather how comprehensively they are implemented, how deeply they are integrated into operations, how automated or predictive the processes become and, ultimately, how they position parliament in terms of AI adoption and leadership.

At Level 1 (Initial), parliaments focus on foundational elements: establishing basic governance structures, conducting initial risk assessments, identifying AI use cases, performing basic staff training, and assessing compliance with national frameworks. At this stage, the Guidelines are about awareness and creating a minimal viable governance structure.

As parliaments advance to Level 2 (Emerging), the Guidelines shift from foundational to systematic. Governance becomes more comprehensive, with detailed ethical frameworks and enforcement mechanisms beginning to emerge. Risk management becomes systematic rather than ad hoc, bias mitigation strategies are formalized, and technical implementation moves beyond pilots to include procurement considerations and structured development frameworks. Data governance matures from basic assessment to establishing ownership and stewardship roles. Importantly, capacity-building becomes role-specific rather than general, and inter-parliamentary cooperation transitions from passive participation to active knowledge-sharing.

At Level 3 (Implementation), the Guidelines emphasize comprehensive application and cross-functional embedding. Governance becomes fully operational, with compliance monitoring and transparent reporting. Risk management extends across the entire project life cycle. AI applications scale systematically across multiple parliamentary functions, and portfolio management frameworks ensure coordinated deployment. The Guidelines stress structured engagement processes and joint initiatives with other parliaments, while training systems become embedded within institutional practice.

Levels 4 (Integration) and 5 (Leadership) represent maturity plateaus where the Guidelines focus on institutional naturalness and innovation. At Level 4, governance becomes adaptive with real-time monitoring, security systems become integrated and continuous, and stakeholder involvement becomes embedded in daily operations. By Level 5, parliaments move towards leadership roles: setting global standards, developing predictive management frameworks, engaging in international capacity-building, and contributing to the development and adaptation of worldwide AI governance norms.

By cross-referencing specific (sub-)guidelines with levels of maturity – from ad hoc through to innovation leadership – parliaments can prioritize their efforts and focus on the most appropriate support for their current level of AI development. This helps parliaments using the Guidelines to develop a road map and understand which (sub-)guidelines are likely to be most relevant at each stage of their AI journey.

Table 3 – Cross-references between this Framework and the *Guidelines for AI in parliaments*

Guideline or sub-guideline	Framework: Level of maturity				
	Level 1 Initial	**Level 2 Emerging**	**Level 3 Implementation**	**Level 4 Integration**	**Level 5 Leadership**
STRATEGY AND GOVERNANCE					
Strategic actions > AI governance	Established governance structure; AI governance body; preliminary policy framework	Comprehensive AI governance policy; enhanced oversight mechanisms	Policy enforcement; comprehensive framework implementation	Adaptive governance systems; real-time monitoring	Global standard-setting; anticipatory frameworks
Strategic actions > Policy and structure	Defined roles; established multidisciplinary team; basic governance structure	Detailed AI policies; working groups; enforcement mechanisms	Full policy implementation; compliance monitoring	Embedded policy frameworks; mature governance	Next-generation governance models
Strategic actions > Strategy and innovation	Vision development; strategic planning; small pilots	Innovation culture; systematic pilot strategy	Strategic deployment; performance measurement	Continuous innovation; institutional commitment	Global innovation leadership; future readiness
Strategic actions > Stakeholder engagement	Stakeholder identification; initial engagement across parliament	Broader engagement; feedback systems; external partnerships	Structured engagement processes; stakeholder integration	Embedded stakeholder involvement; cross-functional teams	International cooperation leadership; capacity-building

Guideline or sub-guideline	Framework: Level of maturity				
	Level 1 Initial	**Level 2 Emerging**	**Level 3 Implementation**	**Level 4 Integration**	**Level 5 Leadership**
RISK MANAGEMENT AND ETHICS					
Generic risks and biases	Risk identification; basic framework; initial bias awareness	Systematic risk assessment; bias mitigation strategies	Advanced risk management; comprehensive bias controls	Real-time risk monitoring; automated bias detection	Next-generation risk frameworks; predictive management
Ethical principles (all eight)	Basic ethical framework; development of code of ethics	Full implementation of all eight principles; comprehensive policies	Systematic ethical compliance; monitoring mechanisms	Integrated ethical systems; algorithmic auditing	Global ethical standards; ethical leadership
Risk management	Basic risk processes; initial risk register	Three questions evaluated; systematic assessment	Full-life-cycle risk management; advanced treatment	Automated risk monitoring; continuous review	Predictive risk management; anticipatory controls
TECHNICAL IMPLEMENTATION					
The role of AI in parliaments	Use case identification; opportunity mapping	Legislative research; administrative automation; constituent services	Advanced parliamentary applications; systematic deployment	Cross-functional integration; workflow embedding	Cutting-edge applications; democratic innovation
Introducing AI applications	—	Low-risk pilots; procurement considerations; vendor assessment	Systematic deployment; implementation strategy	Workflow integration; operational embedding	Next-generation applications; emerging technology
Project portfolio management	—	STEP approach; systematic pilots; basic portfolio	Portfolio scaling; performance measurement; strategic alignment	Advanced portfolio management; continuous innovation	Innovation portfolio leadership; sharing of best practice
Systems development	Basic development frameworks; infrastructure assessment	Structured life cycle; deployment patterns; agile methods	Custom parliamentary solutions; advanced integration	Sophisticated development processes; automation	Next-generation development approaches; innovation

Guideline or sub-guideline	Framework: Level of maturity				
	Level 1 Initial	**Level 2 Emerging**	**Level 3 Implementation**	**Level 4 Integration**	**Level 5 Leadership**
DATA AND SECURITY					
Data governance	Basic data assessment; ownership identification	Data ownership; stewardship roles; quality processes	Unified data platforms; comprehensive governance	Advanced data integration; automated governance	Data governance innovation; global standards
Security management	Basic security measures; threat assessment	AI-specific cybersecurity measures; protocols	Technical, organizational, human and physical controls	Integrated security systems; continuous monitoring	Next-generation security frameworks; innovation
CAPACITY-BUILDING AND COOPERATION					
Training for data literacy and AI literacy	Baseline assessment; foundational training programmes	Role-specific training; development of champions network	Advanced training systems; embedded expertise	Continuous learning culture; cross-functional competency	Global training leadership; thought leadership
Inter-parliamentary cooperation for AI	Participation in networks; experience-sharing; early collaboration	Active participation; knowledge-sharing; case studies	Joint initiatives; development of standards; partnerships	Leadership in cooperation networks; capacity-building	Global standard-setting; international influence
ALIGNMENT AND STANDARDS					
Alignment with national and international AI frameworks and standards	Research frameworks; assessment of compliance requirements	Ongoing alignment monitoring; policy adjustment	Full compliance systems; systematic alignment	Advanced compliance management; automated monitoring	Contribution to the development of global standards; thought leadership

Conclusion

The adoption of AI in parliaments represents a significant opportunity and a complex challenge. As AI continues to reshape democratic governance worldwide, parliaments must navigate this transformation thoughtfully, balancing innovation with the preservation of democratic values, transparency and public trust. This *Maturity Framework for AI in Parliaments* has been developed to support that crucial endeavour.

The Framework provides parliaments with a structured yet flexible approach to AI adoption, acknowledging that each parliament's journey will be distinct. Through its six levels of maturity, it offers a clear progression pathway that parliaments can adapt to their unique circumstances.

Central to this Framework is the principle of flexibility. Each institution operates within different constitutional systems, faces distinct resource limitations and holds varied strategic objectives. Each parliament should determine which maturity levels are most appropriate for its specific context. By evaluating each development area independently, parliaments can pinpoint where they excel and where focused attention is needed, guiding strategic planning and investment choices.

Parliaments should revisit this Framework at regular intervals, gathering lessons from peer experiences while staying grounded in their own institutional realities.

The IPU's Centre for Innovation in Parliament will continue its work to assist parliaments in their AI journeys. Through continued inter-parliamentary cooperation, knowledge-sharing and capacity-building, parliaments can collectively strengthen their democratic institutions for the digital age.

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