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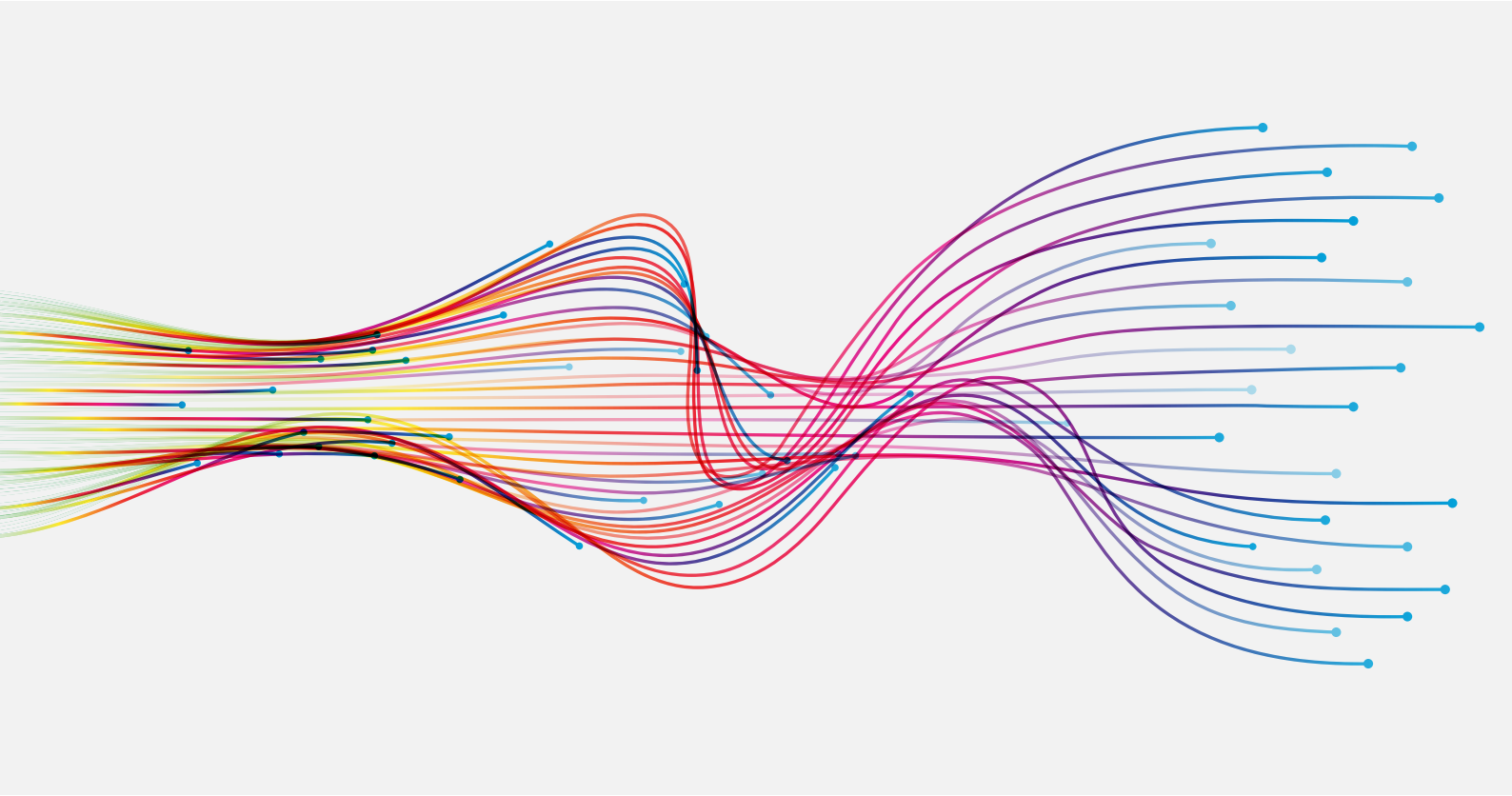
Using generative AI in parliaments



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Summary

Generative AI (GenAI) has emerged since late 2022 as a new way to create content. It promises productivity gains and, perhaps, transformational change. Further rapid developments in GenAI are to be expected.

As the technology matures, there are likely to be many use cases in parliaments. A step-by-step, risk-based approach will be appropriate for most parliaments.

Based on current parliamentary practice and research by the Inter-Parliamentary Union's Centre for Innovation in Parliament, parliaments are encouraged to begin experimenting with GenAI, for example, to save time with tasks such as producing summaries of texts and creating records of parliamentary debates. Such experiments should be carried out in a safe "lab environment" before being rolled out more widely.

However, parliaments need to be extremely cautious about introducing GenAI in core legislative systems at this stage. High levels of confidence in the technology and strong governance processes are needed before such a step is considered.

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Artificial intelligence (AI) has been in regular use in many parliaments. Examples include anti-virus, email spam protection and cybersecurity software. These systems use AI to make thousands of often seamless decisions every day.

Generative artificial Intelligence (GenAI) has emerged since late 2022 and is the subject of much current interest and debate. It is predicted to have a significant impact on our lives and is already being adopted, at least experimentally, by parliaments. It is a form of AI that can be prompted to generate text, images or other data using generative models based on large volumes of data (often referred to as "large language models", or LLMs). GenAI models learn the patterns and structures of their input through training, then generate new data that has similar characteristics.

GenAI can speed up content creation and lead to novel forms of content generation. Imagine, in the case of a parliament, that the GenAI application has ingested the entire corpus of legislation and could use this to draft new bills. But concerns exist about transparency, accuracy and the responsible use of this technology. The focus on GenAI is because of its power to create content that we deem important or influential but also, potentially, false and malicious.

This Issues Brief outlines key considerations about GenAI that it is important for senior leadership in parliamentary administrations, including those working in ICT roles, to be aware of. In many ways, the road map for introducing GenAI should be similar to that for other new technologies that are considered for parliamentary use, and follow the same technology adoption curve.

Expect rapid change

What GenAI can offer has exploded over recent months. This rapid development of GenAI capabilities will continue, improving the quality and precision of the tools that are available, and likely reducing their costs. Increasingly, GenAI will appear not only in a parliament's own systems but also in the third-party software parliament uses.

As well as offering opportunities, this creates risks. The pace of development needs to be matched by the development of safeguards and control mechanisms, ensuring safe and effective use within parliaments. The complexity and scale of GenAI architectures make it difficult to understand how they produce results and to explain why these results (and not others) are generated for a given input. This can lead to the phenomenon of "hallucinations", where inaccurate, misleading or made-up results can appear.

However, GenAI is not the final evolution. Other AI-based technologies exist and even more powerful technologies will start to mirror and mimic the human brain, becoming more predictable and coherent. Examples include:

- neuromorphic computing, which aims to replicate the human thought process digitally
- neurosymbolic AI, which combines the statistical, data-driven learning capabilities of neural networks with symbolic reasoning

Over the next few years, parliaments will need to assess and understand the benefits and risks of all the emerging forms of AI. GenAI is just the start.

Understand impact and risk

Consider a range of everyday tasks carried out in parliaments: undertaking research, writing documents and speeches, managing amendments, drafting legislation. Now consider the risk profile of each of these tasks. What internal safeguards and rules need to be in place in order for any of these tasks to be entrusted to AI?

The impact level matters: there are likely to be relatively well-defined tasks that AI systems can be used for with little or no risk. In other cases, such as legislative drafting, the potential impact could be very high, with a profound impact on people's lives.

Managing and mitigating the risks is possible, but this requires transparency at the very heart of AI systems. "Explainability" – the ability to understand how and why GenAI systems produce certain results – is vital because it ensures transparency and accountability, allowing for informed decision-making and ethical use. Parliaments will need to demonstrate that these principles are embedded in their use of GenAI in order to build trust among members and the public.

Legislation and regulations will likely struggle to keep up with the rapid pace of technology development. However, in many cases existing laws on disinformation, electoral campaigning, intellectual property and libel, for example, can protect against the misuse of AI-generated content.

Ensure a strong culture of digital transformation

The adoption of GenAI in parliaments should be subject to the same routines as other technology solutions, namely discovery, learning, experimentation, development of simple use cases, and project initiation.

Given the newness of GenAI and the speed of change, it seems sensible to start with small, well-contained business cases and to build up from there, and to take an iterative, prototype-driven approach to development. Approaches to digital transformation and examples of good practice can be found in the Guide to digital transformation in parliaments, published by the Inter-Parliamentary Union (IPU) and the Association of Secretaries General of Parliaments.

Perhaps more than ever before, parliamentary leadership, business owners, ICT departments and users need to engage in continuous dialogue to decide whether (and where) to pursue this specific technology. In addition, considerable political attention is being paid to GenAI as parliamentary committees are conducting expert hearings and inquiries to determine its broader impacts on society. This offers an opportunity to ensure that members are aware of the pros and cons.

Be realistic about the limitations of GenAI

Systems using GenAI have limitations and are not yet fully reliable. Their answers can be subject to bias and false interpretation, and these systems cannot always guarantee accuracy. It is important that LLMs are trained in accordance with ethical principles, to ensure that the source materials are broad and that they avoid gender bias, the perpetuation of stereotypes or the undermining of minority perspectives. This is not necessarily easy to do, since these systems can only draw on what already exists. Indeed, as GenAI becomes more mainstream, it risks becoming self-referential, learning from its own generated content. In turn, this could impact the quality of the output.

The starting point for parliaments may therefore be to experiment with GenAI and to build prototypes, taking an iterative approach. This would help parliaments learn about GenAI's potential. It may also be interesting to experiment with training GenAI systems exclusively on parliamentary documents, since the quality of these documents is well-established. At this early stage, however, it may be premature to use the technology in core business processes.

Keep humans in the loop

GenAI will appear in parliaments indirectly through the applications and systems people are using (sometimes with little control over their presence: consider that it is increasingly integrated into common applications such as Microsoft Excel or Google Docs).

Where GenAI is implemented in core parliamentary systems, such as those used for legislative drafting, parliaments will need to exercise caution, control and oversight in order to ensure reliability and accuracy. Internally, GenAI projects will involve a range of stakeholders, potentially including ICT and cybersecurity specialists, legal officers, and those responsible for data protection.

At this stage of GenAI maturity, it is vital to maintain human scrutiny and control of all the processes a parliament introduces the technology into. Any outputs must be explainable and subject to expert validation, and the entire system must be auditable.

Build capacity through collaboration

GenAI is complex, complicated and nuanced. Individual parliaments working alone may, initially at least, lack the skills and knowledge to implement GenAI-based systems safely and effectively. Yet this is a challenge that more and more parliaments are facing – and those legislatures that are ahead on the adoption curve already have significant lessons that they can share.

The IPU's Centre for Innovation in Parliament (CIP) encourages parliaments to collaborate and to share use cases, problems and solutions. Talking with others helps ensure that risks are mitigated and opportunities realized. The CIP's Parliamentary Data Science Hub is heavily involved in developing good-practice guidance on the use of AI. All parliaments are encouraged to connect with the CIP, and to look out for opportunities to work with universities and academics in the field.

This Issue brief was written by the IPU's Centre for Innovation in Parliament with the considerable assistance of the Senate of Italy, and with input from the parliaments of Austria, Greece and Ireland, and the Chamber of Deputies of Chile.

It sets out initial guidance for parliaments on the basis of the situation in March 2024. Given that the technology is evolving rapidly, the guidance is expected to be updated regularly. Parliaments are invited to share feedback and updates with the Centre for Innovation in Parliament at innovation@ipu.org.

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