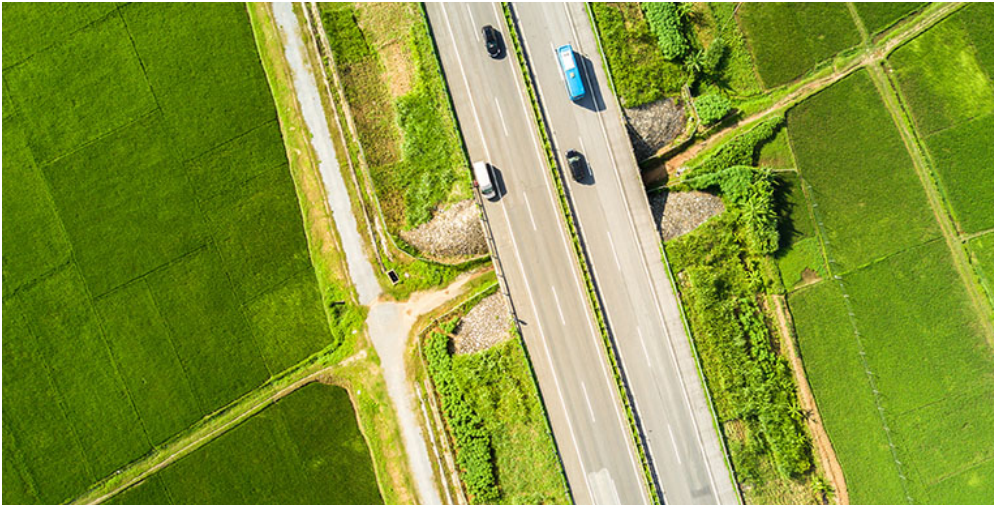


INSIGHT

A Thinking State, Artificial Intelligence, and Long-Term Country Evolution



Big data analytics can help policy and decision makers chart the long-term path of development for their country. Photo credit: ADB.

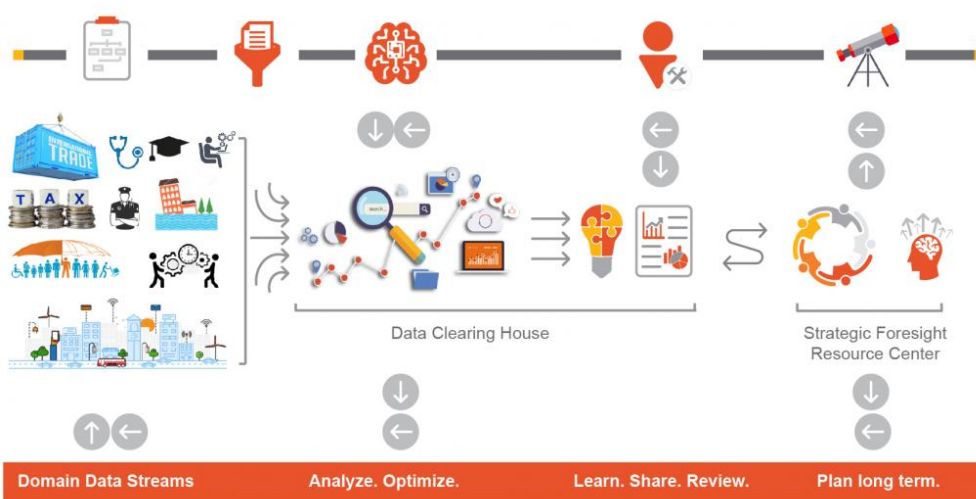
Here's how artificial intelligence can support governments in learning, performing better, and crafting strong development partnerships.

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Introduction

Governments are legal entities that define and drive the national agenda; actions of the governments expressed through public policy regulate key players in the society, lending predictability to the non-government sector and affording protection to the citizens via social objectives. Working within a limited time horizon, tied to the election cycle, governments aim to do more with less, have less time or inclination for strategic planning and often end up achieving less.

Artificial Intelligence for a Thinking State



Infographic courtesy of the author.

Can There Be a “Thinking Government”?

A government has a limited time to execute its mandate. Thinking for a government can be a learned behavior, it suggests a careful cerebral consideration of something and it should make sense of everyday situations and effectively process experiences.

A Government’s work by default tends to be operations-intensive . Governments are also political entities and a significant part of their attention and time goes into political responsiveness and managing the expectations of stakeholders. A significant amount of energy, time, and effort goes into showcasing, prioritizing, and defending how they will and are performing better than their predecessors. Sometime into the second half of an administration’s term, government officials start thinking about elections and what they must do to win people’s imagination again.

A government can be operationally challenged, occupied with its own agenda or sometimes trapped in firefighting mode, leaving little space for strategic thinking. Continuity beyond the term is the focus rather than deeper, long-term planning. The political party that comes into power for the first time may have no time for thinking from the very outset, especially if there are complex or pressing issues to be managed requiring significant expertise, collaboration, and understanding of country governance dynamics.

The government is therefore working on what it should cause to change, what it should be changed to, and how to do it. Working with constraints, it mostly engages in level one thinking and good heuristics, driven by cause-and-effect relationships. Tactical thinking is also influenced to a degree by interest groups, party interests, and political considerations.

Learned domain decisions

Governance dynamics are complex, and problems result from an interplay of variables acting over time; effective use of data can save the “firefighting” time and energy spent on managing symptoms, find root causes, and underline options. Big data analytics can serve as a valuable tool for the government to reduce operating costs, make faster and “learned’ domain-level decisions, and design new and better

service delivery solutions for citizens.

Governments are tenured managing entities. The government, however, has little proclivity for strategic thinking for the distant future of the country. Yuval Noah Harari, an acclaimed futurist, thinks, “Governments manage—and, generally speaking, they are doing a fine job of it, but they no longer plan ahead or lead.” The most important constraint a government works with is **time**. Operating within frameworks and making use of the codified domain knowledge can enable structured thinking and make a government operationally smart.

A tenured government is a set of people (generally belonging to a single political party) who are empowered to define, administer, and execute public policy in a country for a period of time. Every newly elected government is mandated with the mission of putting into effect certain policies and/or reforms that the bureaucracy is tasked to implement. It thus follows that a government is an organism that acts and reacts, a “mandated vehicle,” brought into existence for an assignment and has a set of objectives and goals that it must endeavor to realize.

The span of government attention and consideration ranges from policy issues that address complex socio economic problems, agenda setting, prioritization in allocation of limited resources, and most importantly, for its own sake, ongoing political management.

A Government needs to be adaptive. A government spends most of its time in planning, execution and monitoring, while very little time goes into self-evaluation and, practically, none into reflection. The first three activities constitute experience that can feed into the latter two activities for useful learnings to be generated. The government can be deliberative, if not reflective, and use the learnings to plan and implement better, make optimal resource allocation, identify and correct its own mistakes, adapt, make early course corrections and leverage situational knowledge across sectors and domains.

Government also need to find solutions to problems and resolve issues, which is a function of crafting intelligent options and selecting the means to deliver the most preferred one. Government takes daily decisions while working with tradeoffs, externalities and unintended consequences; the decision to be open to learning is inherent and not an obscure choice.

A government could learn from data that it possesses and the data it can generate since it needs to self-evaluate and improve its delivery throughout the course of its term.

How Can Data Enable Structured Government Learning?

Can a government be inspired or learn from criticism? How well can the thinking centers be plugged into the policymaking process? Who makes sense of the government’s information and data? Can the government evaluate itself or reflect?

Psychologist Robert S. Woodworth regarded thinking as a mental exploration of the data to deal with the

environment effectively.

All experiences can be reduced to a set of data and information. Codified accumulated experiences can support government-level “process thinking,” entailing actionable learnings. In a fast-changing socio-economic environment underwritten increasingly by technology, cause-and-effect relationships are nonlinear and an ongoing phenomenon. Data analysis can be of critical import to shape results, outcomes, and impact.

The public policy process goes through the stages of agenda building, formulation, adoption, implementation, evaluation, and termination. The entire loop could hugely benefit from information and data sets on past projects, regulatory decisions, and socioeconomic interventions. The use of artificial intelligence (AI) in decision-making and design thinking could support targeted interventions, resource efficiency and efficient implementation, and deliver value for the citizens and government itself.

Data clearing house

A key decision support learning infrastructure that the government can create is an ICT-enabled, human-resourced data clearing house. This would receive domain-level data from various government agencies and projects and run analytics for generating insights and actionable operational advice that can be ploughed back into the planning and implementation process of government domains. The knowhow, querying, and key reports may be shared online in real time in addition to the push methodology.

A disciplined approach to learning would imply systems thinking for examining problems methodically within the ecosystem before acting. This capacity to learn is built up over time through business intelligence systems that rely on data and information and help in generating trends and patterns, allowing identification of interconnections and crafting options. Feedback loops and consequent actions over time create systems and domain archetypes that can be the empirical basis to guide policy and action.

Organizations, and yes, every government is one, can learn from experiences over their lifecycle; that however is a function of how well the data is harvested from each experience and how good the organization is in codifying and using that knowledge.

Strategic foresight resource center

A key thinking organization that the state can set up is a strategic foresight resource center. This can bring together the power of AI, knowledge of international trends, and human expertise to plan intelligently and come up with policy options to support sustainable growth. AI-driven thinking can help in generating framework insights, doing predictive analysis, and establishing long-term trends to support planning.

This planning process can arguably benefit from a more “distributed and diverse human thinking” by engaging qualified and distinguished individuals that represent all elements that form the backbone of the state and not just the incumbent government. The refined aggregated wisdom afforded by a

strategic foresight resource center can be a cardinal synergetic capability for each succeeding government administration to learn from past plans and mistakes (and its own), make enabled decisions, and consequently perform better.

A Thinking State, AI, and Data Ownership

Thinking may not be meat-and-potatoes to a government, but it can have an existential value for the state, simply because the later has a longer tenure and arguably a much bigger stake in how the country will fare over the long term. Complex contemporary challenges like climate change and technological disruption including AI and biotechnology have fast-evolving socioeconomic implications and long-term impacts that are already beyond the scope and realm of any single serving political government.

The 1933 Convention on the Rights and Duties of States while defining statehood refers to the state as a “person of international law.” A state is free to “organize any system of government” and can have the endurance, broader view, the vision, and continuity to support the strategic agenda on how the country looks to position itself among its competitors and peers in the near future and how the long-term evolution will be realized.

Securing a national competitive advantage

A state has to learn continuously, think strategically, and denominate the process of stakeholder engagement. With history as a guide, a national competitive advantage is created and secured over several years of consistent policy execution, not just one or two terms of an administration. If experience is the best teacher as the maxim goes, then the state, arguably, should have the experience of multiple administrations. Data science can also be used to comparatively index performance of successive administrations based on a set of agreed benchmarks that broadly support long-term direction.

Data ownership

It is said, “He who owns the data owns the future.” Being the terminus of all government data streams, the data clearing house will need to be an effective custodian. The utility and effectiveness of data management will depend on the kind of data transaction regime that is put in place. A clear set of rules can inform what kind of data will be generated, how it will be processed, and how it will be used in a fair and equitable manner. Autonomy and strong governance can assure that the strategic capability is used fairly, impartially, and efficaciously by governments.

Governments are always looking to achieve consensus on key issues. “The problem is that extraordinary performance comes only from correct nonconsensual forecasts, but nonconsensual forecasts are hard to make, hard to make correctly, and hard to act on,” writes billionaire investor Howard Marks. The state, thus, can engage in “divergent second order thinking” and inspired long-term planning, drawing from the thinking center that relies on AI on one hand and human resourcefulness on the other.

Development Partnership for Long-Term Country Evolution

In *The Entrepreneurial State: Debunking Public vs. Private Sector Myths*, economist Mariana Mazzucato stresses the role of the state in fostering long-term innovation and inclusive economic growth. One could make a case that a thinking state can be an entrepreneurial state with a long-term perspective on the long-term economic identity of a country.

Consensus on country development partnership strategy

Constituent elements of a thinking state can range from governing and non-governing leadership, business elite, political parties, civil and military bureaucracy, civil society, think tanks, and interest groups. It is a well-known argument that an elite consensus is a necessary basis that sustains democratic governance and growth. Segments of polity that enjoy an exerting influence on the state because of their privilege, position, or wealth may also be engaged to contribute to country partnership strategy.

Progression is a function of stability, continuity and sustained risk assurance besides capacity and resources. Any enterprise that has a significant bearing on the long-term fortunes of a country will barely find its feet within the term of a single administration. A thinking state can be the best partner of international development agencies in co-authoring and co-owning a country development partnership strategy that can support long-term growth and be the fulcrum for at least four to five successive administrations. While the strategy may need to be adjusted and tuned periodically, given the rate of change in our times, this approach will provide agreement on a broad economic charter, assuring continuity.

Alignment of country operations planning

The development of operational planning may be aligned with the objectives and counterpart sectoral plans of an incoming administration in the interest of early ownership and efficient implementation.

Since the operational plan of the government will be framed largely under the overarching “secured” country strategy, usual issues such as frequent changes in leadership, redundancy of rules and regulations, and cultural issues, like risk avoidance, may be minimized.

The state has the advantage of leveraging a more distributed thinking and ownership regime as compared to a political government, which is an operational organization—a kind of special vehicle inducted to administer a program over a defined term. Data-enabled foresight can present an aggregated wisdom capacity that can be used to chart the long-term course of a country and support government performance. An impactful development partnership with a country, thus, can have two levels of engagement; one high-level and strategic that pivots on the long-term country evolution, and a subset, a very operational one, that is aligned with each respective administration’s agenda and geared to deliver efficiently.

Resources

A. Anthony. 2018. Yuval Noah Harari: “The idea of free information is extremely dangerous.” *The Guardian*. 5 August.

Centre for Public Impact. 2017. Looking Long Term: How Governments Can Use Strategic Foresight.

E. Eidam. 2017. Study: Government Should Think Carefully About Those Big Plans for Artificial Intelligence. *Government Technology*. 18 August.

E. Siegel. 2018. Prediction in the Public Sector: Why the Government Needs Predictive Analytics. *Predictive Analytics Times*. 19 June.

Farnam Street. Developing a Mental Framework for Effective Thinking.

M. Goodman. Systems Thinking: What, Why, When, Where, and How? The Systems Thinker.

M. Mazzucato. 2013. Government—Investor, Risk Taker, Innovator. TED Talks.

O’Reilly. 2018. Trends in data, machine learning, and AI. 20 December. The O’Reilly Data Show Podcast.

PsychologyDiscussion.net. Thinking: Nature, Tools and Processes | Psychology.

Quora. What Is the Best Framework to Thinking?

SAS. Getting the Right People on the Big Data Bus. A SAS Best Practices White Paper.

Y. Harari. 2015. Who Owns the Future? How the Prophets of Silicon Valley Took Control. *New Statesman*. 18 June.



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