WORLD
ECONOMIC
FORUM

Empowering Artificial Intelligence Leadership

PROJECT CASE STUDY
OCTOBER 2020

Project overview

Artificial intelligence (AI) is the software engine that drives the Fourth Industrial Revolution. Its impact can already be seen in homes, in businesses and in the political sphere. While AI holds the promise of solving some of society's most pressing issues, it also presents challenges, such as inscrutable "black box" algorithms, unethical uses of data and potential job displacement.

As AI increasingly becomes an imperative for business models across industries, corporate leaders require the tools to identify the specific benefits this complex technology can bring to their companies as well the concerns it raises and the need to design, develop and deploy it responsibly. Striking the right balance will lead to sustainable businesses in the Fourth Industrial Revolution, and failure to do so could damage brand value and attract customer backlash.

Board members of major corporations are responsible for guiding their companies through the current period of unprecedented technological change and its attendant societal impacts. Practical tools are needed to empower board members and decision-makers to ask the right questions, understand key trade-offs and meet the needs of diverse stakeholders. This AI toolkit for boards of directors was designed around four pillars: technical, brand, governance and organizational impacts of AI. It brings to each an ethical lens for decision makers from a broad range of companies, whether they are creating, purchasing, using, and/or selling AI solutions. The toolkit also supports companies in deciding whether and how to adopt particular approaches to ensuring their AI systems are ethical, such as appointing a chief values officer or creating an ethics advisory board.

The toolkit was designed by AI experts in collaboration with board members from diverse companies and industries to ensure it meets the specific needs of this user community, with input from relevant stakeholders across sectors to ensure the inclusion of diverse perspectives. The toolkit was developed with and first piloted by BBVA Colombia.

Project phases

Assess

The team hosted brainstorming sessions with diverse AI experts to assess the state of AI in corporate governance and identify and explore key gaps. Working with Accenture, the team conducted 15 in-depth interviews with board directors and surveyed over 140 active board directors to elicit the needs, priorities and usability preferences of real end users. A review of the existing landscape revealed that while separate toolkits exist for board-level decision-making in general and for various aspects of ethical AI unrelated to boards of directors, this toolkit is the first to address the specific needs of boards of directors with oversight of companies that are developing or using AI technologies.

Design and develop

The team elaborated the scope of the project through further research and consultation, led by Ana Rollan from BBVA in her capacity as a C4IR Fellow at the Forum. Multiple workshops refined the project's priority focus areas, and once consensus was achieved the team initiated the development of governance frameworks aimed at addressing these issues.

The project benefited from a dynamic stakeholder community that the team built and sustained throughout the project's four phases. During the assessment phase, for example, more than 150 organizations participated in the scoping survey, supported by key partners like The Australian Institute of Company Directors. The framework development phase involved expert input from over 100 companies, non-profit organizations and academic institutions, including Accenture, IBM, Suntory Holding, Best Practice AI, Latham & Watkins, Splunk and AI4All.

The final toolkit includes 12 modules, each mapping to a priority issue identified through the team's initial research.

The modules include ethics, audit, governance, risk, responsibility, brand strategy, competitive strategy, customer strategy, operations strategy, people and culture, technology strategy and cybersecurity. The focus of each module is to educate board directors on the ethical and responsible use issues presented by AI in each topic area, and to guide them in making informed decisions when they are required to exert board-level oversight or leadership in these areas.

Each module includes six sections:

– An introduction to introduce the subject and how AI affects it

– Examples that demonstrate the impact of AI

– Responsibilities to review board mandates that intersect with the subject

– Oversight which provides the board member with three tools:

  – a knowledge management tool to assess one's knowledge of the subject
  – a performance review tool to gauge the organization's performance in this topic
  – a guidance tool that offers possible actions by the boards in an if-then format

– An agenda to help introduce the topics in board meetings

– Resources: further external resources about the topic

Deploy

The team developed a four-phase approach by which boards of directors can pilot the use of the toolkit:

– Survey phase: a quick survey to understand each board member and their individual knowledge and concerns

– Toolkit review: each board member reviews at least two modules in depth (ethics module and any other module)

– Board meeting: a team member from the Forum's Centre for the Fourth Industrial Revolution Network presents the toolkit as an agenda item at a board meeting and facilitates its practical application by participating directors

– Feedback phase: a survey and interviews capture lessons from the pilot, outcomes from the toolkit's use and feedback for future iterations

Initially the team focused on a small number of consecutive pilot exercises rather than conducting multiple in parallel, to better account for the diversity of board mandates and functions and the need to get as much uninfluenced feedback as possible. Early feedback indicated that while many boards were interested in learning about AI and using the toolkit, they were not able to dedicate enough of their precious meeting time to conduct an intensive exercise. To address this the team designed a "light" approach of piloting the toolkit that targets individual board members and focuses on their own responsibilities and contributions as determined by their specific role(s) on the board.

To ensure effective monitoring and continuous learning, the team developed a framework to assess the toolkit's implementation – both quantitatively and qualitatively – taking into account the unique roles of boards as advisory rather than operational entities.

Next Steps and scale

The Forum's AI Platform is working actively to scale adoption of the toolkit, leveraging its diverse base of industry partners, the Centre for the Fourth Industrial Revolution Global Network, and the broader global AI ecosystem. The team is also engaging with leading universities and industry groups to incorporate the toolkit into continuing education for current board directors and professional training for the next generation of business leaders.

In parallel, the toolkit has been published freely online, where it has been accessed by tens of thousands of users globally. The team is monitoring its ongoing use and updating it to reflect key lessons from early pilots and new developments in the AI ecosystem. A new module has been added to address AI's role in advancing corporate sustainability commitments, and the full toolkit has been translated and released in Spanish.

Finally, the AI Platform has partnered with Saudi Aramco, one of the world's largest companies, to develop a companion toolkit aimed at C-suite executives, focusing on their distinct roles and responsibilities with respect to corporate governance and decision making on AI technologies.