



Artificial intelligence, solidarity and insurance in Europe and Canada

Roadmap for international
cooperation

Summary

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Artificial intelligence (AI), defined here as a set of computer-based automatic learning techniques enabling the performance of more or less general cognitive tasks associated with human intelligence, is already permanently transforming the way the insurance industry operates. In other words, the rise of AI is impacting — and will continue to impact — the ways insurers use the data they have, how they manage insurance contracts and the relationship between insurers and insureds, to name only a few areas. For this reason, oversight of insurance industry AI creation and development practices appears crucial to maximizing positive impacts and minimizing potential negative effects.

Produced by European and Canadian insurance stakeholders, this report aims to spark in-depth discussion on the nature of such oversight and how it might be implemented, whether it should take the form of regulations or consist of standards set by the profession.

To begin such a discussion, we must first of all set out the principles that will enable insurance stakeholders to use AI responsibly. For individuals, mutualization and solidarity provide the means for insuring each other against social risks. Individuals are held to be responsible for some (but not all) of the risks they incur, while insurance companies

seek to segment the market in the most relevant way possible, i.e., to assign different levels of risk to their current and potential clients and price each level accordingly. The increased potential of technology and AI is forcing us to reflect on these practices and their future. For example, insurers' use of connected devices, which provide valuable information about insureds' behaviour, may conflict with the fundamental right of people to live their lives according to their own ideas of the good life. And hyper-segmentation, when extended to its logical conclusion of fully personalized pricing, could call into question the principle of mutualization between insureds. Clearly, it becomes desirable to anticipate the risks associated with deploying AI in order to leverage all of its potential.

We therefore propose the following seven principles to support the adoption and deployment of ethical, trustworthy and human-centric AI in the insurance industry:

- ▶ **SOLIDARITY:** The development and use of artificial intelligence systems (AIS) must be compatible with maintaining solidarity between people and generations.
- ▶ **EQUITY:** The development and use of AIS must contribute to achieving a fair and equitable society.

- ▶ **RESPONSABILITY:** The development and use of AIS must not contribute to lessening the responsibility of insurance professionals or their clients.
- ▶ **TRANSPARENCY AND JUSTIFICATION:** AIS must be intelligible and their recommendations justifiable and accessible to professionals and users.
- ▶ **AUTONOMY:** The use of AIS must respect people's autonomy, and with the goal of increasing their control over their lives and their surroundings.
- ▶ **PRIVACY AND INTIMACY:** Privacy and intimacy must be safeguarded from the intrusion of AIS and personal data acquisition and archiving systems (DAAS).
- ▶ **WELL-BEING:** The deployment of AIS must not be prejudicial to the individuals, professionals and users affected by them and must, as far as possible, contribute to their well-being.

To comply with these principles, AIS should have certain characteristics: all individuals, regardless of the many particular factors that may have influenced them, should be able to understand the decisions made by the AI systems implemented by insurers. These tools should also be designed so as not to duplicate or reinforce some of the biases already experienced by certain members of society (whether contamination by social



biases originates in the data used, the algorithms or the lack of diversity of the teams that developed them). Accordingly, insurance professionals must work with their technology providers to develop systems and procedures that promote AIS auditability and explainability so they are able to explain their decisions in a way that is understandable to the individual concerned. Clients should systematically have the option of requesting an explanation from a human representative. Insurers should take all necessary actions to sustainably prevent the AIS they deploy from unwittingly creating or reinforcing discrimination.

AI's contribution to insurers' performance is already real in some areas, but many of the systems implemented still rely very little on machine-learning technologies. Although they draw on insurers' databases, they are often based on traditional algorithms and statistics. It must be noted that

AI only produces the expected results if insurance professionals have the appropriate knowledge.

Accordingly, we propose to:

- ▶ Encourage the implementation of AIS, consistent with the recommended ethical framework, in all sectors of the insurance business where the deployment of AI is beneficial to insurers and insureds;
- ▶ Carry out an inventory of current educational program and workplace AI training for insurance professionals;
- ▶ Implement a continuous education program for all professionals to keep them up to date.

Trial and error have shown the importance of always keeping “humans in the loop” (i.e., in the decision-making process) and exercising caution when deploying AIS that changes insureds’ relationships with their own environment. To achieve this, we propose to:

- ▶ Encourage healthy transparency in automated underwriting, pricing and claims settlement procedures;
- ▶ Offer clients access to an advisor, if necessary, when dealing with individual insurance;
- ▶ Provide access to a human being when the automated service fails to satisfy the legitimate demands of insureds (transparency and explainability principle);

- ▶ Clearly inform insureds or insurance applicants whenever they are dealing with a chatbot;
- ▶ Offer insureds a simple remedy against algorithmic decisions they find questionable and develop ad hoc mediation services.

AIS and connected devices also allow insurers to set up nudging mechanisms (see chapter 5) and thus influence the behaviour of individuals in a non-coercive way, by automating goal prompts, notifications, activity tracking, etc. For nudging to work and be legitimate, insureds must understand, accept and share the objectives proposed by insurers.

Accordingly, we propose to:

- ▶ Encourage insureds to have smart assistants (including proven reliable connected devices) to facilitate the adoption of healthy behaviors that satisfy their own interests first and foremost;
- ▶ Ask insurers to inform their clients, in particular about the data they collect, when they encourage them to use smart assistants;
- ▶ Where insurers offer connected devices, not make this contribution contingent on the effective use of these devices by insureds or on compliance with the personalized recommendations provided by these devices, to avoid any intrusion

into insureds' private lives and any constraints on their autonomy;

- ▶ Implement a smart assistant data access system that strictly guarantees anonymity and confidentiality of insureds, so that the data cannot be used to assess the behaviour of a particular insured, but can be used by insurers statistically to adjust their predictions;

- ▶ Where, in particular situations, personal data must be transmitted, limit them to what is strictly necessary and transmit them for control purposes only in the event of a claim or dispute;

- ▶ Where it is appropriate in certain cases to incentivize insureds to buy monitoring AIS to prevent behaviours that are contrary to the insurance contract or the law and that present a high risk of loss, in return for a buyer rebate and pricing that rewards good behaviour over time, ask insurers to make clear to insureds that the use of monitoring AIS allows insurers to access personal data as a condition for adjusting pricing or offering rewards;

- ▶ Implement a robust monitoring AIS data access system that strictly guarantees the confidentiality of insureds' data so that data from these AIS cannot be used by third parties for other purposes.



The regulatory environment that currently governs the collection of data on individuals is not the same in Europe and Canada. The European Union adopted a new framework in 2018 with the General Data Protection Regulation (GDPR), while Canada continues to be governed by legislation that is 20 years old, the Personal Information Protection and Electronic Documents Act (PIPEDA).

Canadian law also protects the rights of citizens, but contains significant differences from the obligations of the GDPR, giving organizations more leeway. PIPEDA does not address the issues related to the emergence of AI. The Canadian government

is aware of this and is currently working on modernizing the Act.

We therefore propose that the Government of Canada complement its efforts to modernize and strengthen its regulatory framework by taking into account the principles and rules of data protection laws in other jurisdictions in order to remain a world leader in digital economy innovation.

Finally, new types of partnerships between technology giants and insurers, as well as the issues raised by the emergence of new data (e.g. genomic data, behavioural data) are complex and often poorly understood. The authors therefore propose that a permanent watch on the issue of the use of personal data and AI in the insurance industry be set up, and that a Franco-Canadian research fund be created to review the most complex and crucial aspects.

Insurers are aware that AI will transform their business permanently and that only by using it responsibly can they improve performance, maintain public confidence and minimize the negative impacts of new practices or business models. In both Europe and Canada, emerging risks associated with the use of artificial intelligence could be mitigated by building on the principles already

embedded in existing regulatory and legislative environments, including those relating to governance practices and risk management frameworks within organizations.

We therefore propose that all insurance companies adjust their existing governance and risk management frameworks to systematically incorporate the requisites for introducing AI into their operations. Finally, with the aim of informing consumers, insurers should develop, perhaps jointly, materials and activities designed to build awareness among and educate the general public and insurance professionals.



¹ European Commission. 2018. EU data protection rules. https://ec.europa.eu/commission/priorities/justice-and-fundamental-rights/data-protection/2018-reform-eu-data-protection-rules_en

² Personal Information Protection and Electronic Document Act (PIPEDA) / Loi sur la protection des renseignements personnels et les documents électroniques (LPRPDE), 2000, <https://laws-lois.justice.gc.ca/PDF/P-8.6.pdf>





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