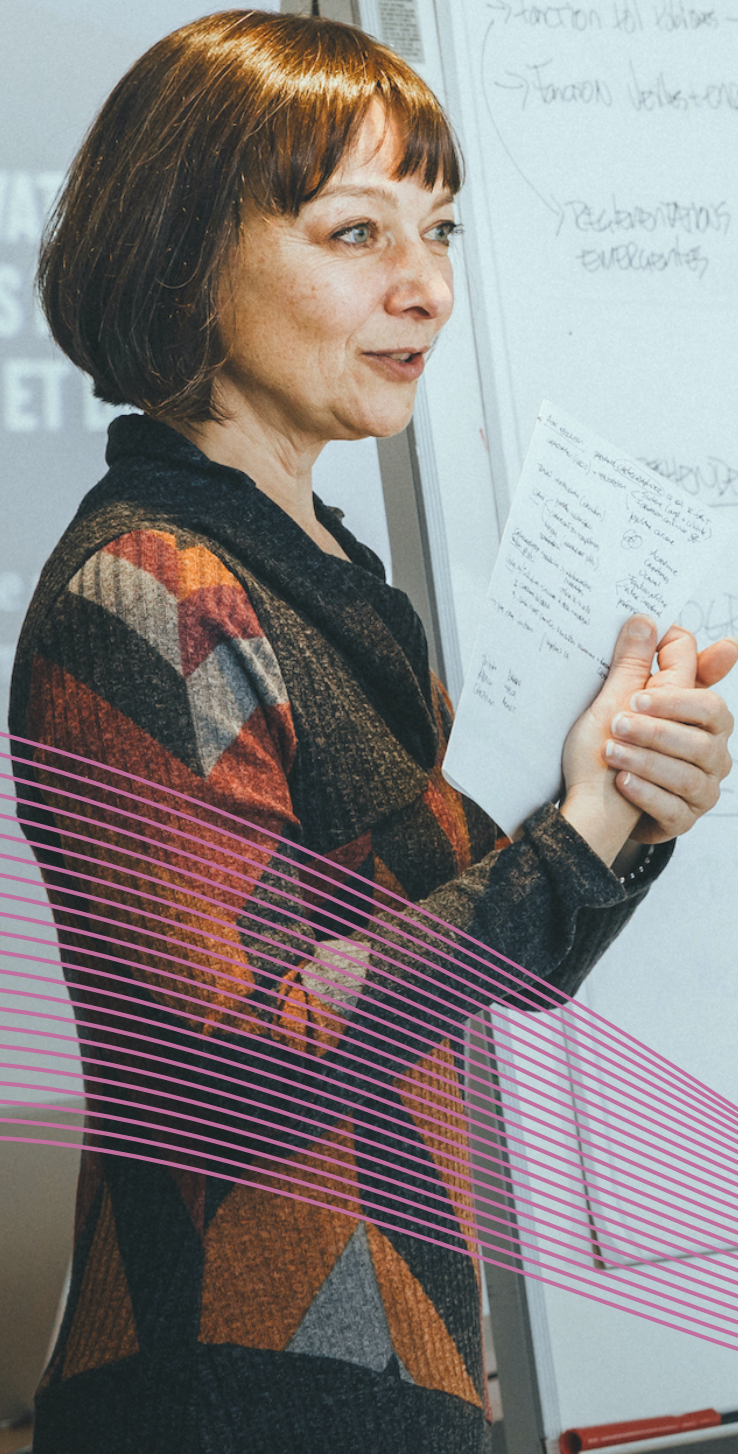




**INTERNATIONAL OBSERVATORY  
ON THE SOCIETAL IMPACTS  
OF AI AND DIGITAL TECHNOLOGY**

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5 novem



Annual Report  
**2019-2020**

The International Observatory on the Societal Impacts of AI and Digital Technology (OBVIA) is a research network financially supported by the Fonds de recherche du Québec (FRQ) that brings together experts from 18 universities, cégeps and colleges in Quebec.

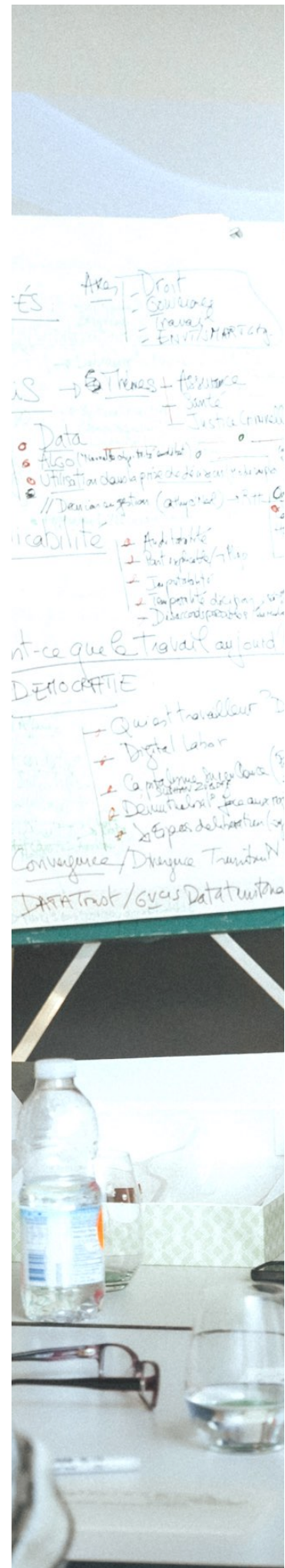
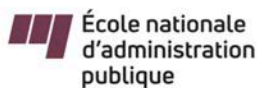
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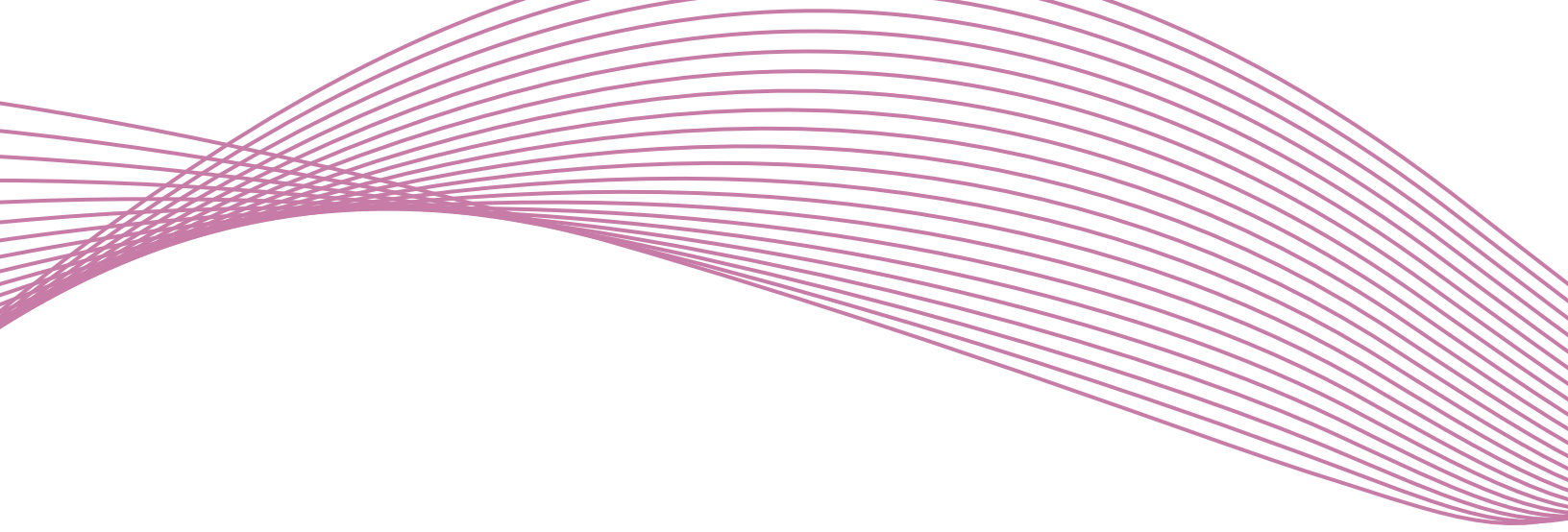
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# WORDS OF WELCOME



**Rémi Quirion**

Chief Scientist of  
Quebec

Just a few words to recognize the impressive work that you have accomplished this year. The International Observatory on the Societal Impacts of AI and Digital Technology (OBVIA) occupies a prominent place in the research ecosystem at a time when artificial intelligence is increasingly mobilizing university and post-secondary researchers and public, private, and non-profit organizations.

What's more, the intersectoral approach that sets you apart is essential to analyzing the potential and possible impacts of AI in numerous spheres of activity, including education, work, health, the economy, and the environment, to name just a few.

OBVIA clearly demonstrates that intersectorality is key to setting collaborations in motion and bringing researchers from different disciplines and sectors into the same space. Intersectorality also brings together stakeholders from different sectors, including citizens, companies, organizations, universities, and governments. The Fonds de recherche du Québec (FRQ) creates these meeting places where useful and responsible innovations emerge alongside shared values. Here, the changes brought about by AI's unprecedented power and complexity provide an opportunity to leverage knowledge and expertise from different disciplines and sectors.

***OBVIA is an opportunity to build new-found intersectoral domains in order to develop innovative algorithms and methodologies and, most importantly, to meet the challenge of ensuring the responsible, ethical, and inclusive use of AI.***

Technology is one thing, but without buy-in from citizens and an intelligent integration into existing systems, it remains underutilized. Since its start, the Observatory has been backed by a solid team and developed a research program that is among the most relevant to our times.

The Observatory also stands out on the international stage, most notably with the recognition it has received from the Organisation for Economic Co-operation and Development, positioning itself as a leader in the responsible use of AI.

We must therefore continue to ask the complex questions raised by AI and digital Technology, take a cross-disciplinary approach, reconcile each field's differences, and be bold and open in the deployment of AI that is innovative, socially accepted, and responsible.



**Eugénie Brouillet**

Vice-Rector of Research,  
Creation and Innovation  
at Université Laval

It was with great enthusiasm that Université Laval welcomed OBVIA to its campus in winter 2018. As a unique entity in both Quebec's ecosystem and internationally, OBVIA plays an active role in the range of debates taking place in our society on artificial intelligence and digital technology. Due to its key role in the new Forum IA Québec, an initiative bringing together industry and academia, the Observatory has also made a place for itself on the international scene.

Most notably, a major partnership with the Organisation for Economic Co-operation and Development (OECD) was signed last June during the International Economic Forum of the Americas, an event with international scope where a number of researchers from the OBVIA community had the opportunity to present their work.

Throughout the past year, Lyse Langlois and her team were also invited to present the Observatory's unique structure to senior government officials from different nations during diplomatic missions to Germany, France, and the United Kingdom.

These missions have served to increase the renown of OBVIA's expertise internationally, as evidenced by the major recognition it has received in various forms. To begin, OBVIA was invited to participate in the development of the scientific program for the Global Forum on AI for Humanity held in Paris last fall. In addition, as part of the Global Partnership on Artificial Intelligence (GPAI), OBVIA will occupy a strategic position within Montreal's new centre of expertise by providing support for its work and that of the Government of Canada's Advisory Council on Artificial Intelligence.

With its many successes, this first year testifies to OBVIA's ability to showcase Quebec's expertise to key players in the field and to further societal debates and ethical reflection on AI and digital technology.



**Lyse Langlois**

General Director of  
the International  
Observatory on the Societal  
Impacts of AI and Digital  
Technology

It is therefore with great pride that I present to you the 2019-2020 Annual Report of the International Observatory on the Societal Impacts of AI and Digital Technology. OBVIA's team has shown solidarity and remained unwavering in its support despite the constraints faced these past months. Our collaborations were put to the test under COVID-19 but, through our unity and solidarity, we were able to overcome the challenges we encountered. I would like to express my sincere gratitude to them and emphasize how blessed I am to count on such a dedicated team. Commitment and dedication are essential to establishing a structure like OBVIA's: they are the bonding agents that allow the foundations to be poured. These are also the leading qualities of the co-heads of the research themes and functions who work tirelessly in the construction of an interdisciplinary body of knowledge on the societal and ethical impacts of AI and digital technology. And let's not forget the COVID-19 committee, which has been meeting time and time again to help public decision-makers make informed, research-based decisions in a time of crisis.

Will the current technological revolution really transform our societies and move them forward, or will it repeat certain mistakes made during previous industrial revolutions? OBVIA's creation testifies to Quebec's political will that is unique to the world, and demonstrates that Quebec is taking into serious consideration the impacts that artificial intelligence systems (AIS) and digital technology have on people's lives, while seeking to protect the common good.

OBVIA is a new voice in the discussion, and this is only the beginning. It is the cumulative expertise of renowned researchers from Quebec and abroad who simply wish to take an active part in this revolution. History will recognize the role they have played in remaining vigilant and mitigating risks to promote responsible and ethical innovation. Every effort is being made to make this voice heard.

# MISSION & VALUES

The International Observatory on the Societal Impacts of AI and Digital Technology is a space for discussion and reflection by all stakeholders concerned with artificial intelligence (AI), its development and its use.

*Our mission, based on a critical examination of technological innovations, is to raise crucial issues and identify plausible solutions to the problems and opportunities posed by AI and digital developments in Quebec and elsewhere in the world.*

OBVIA aims to contribute to the common good that must be pursued through digital innovation. Via knowledge production and research-creation projects, OBVIA addresses technology's benefits to society and engages democratic institutions. The Montreal Declaration for a Responsible Development of Artificial Intelligence serves as OBVIA's ethical charter and the concept of responsible innovation is central to our work.

## Our Values

We adhere to the FRQ's (Fonds de recherche du Québec) recommendations for accountability in research that promote values such as honesty, trustworthiness and rigour, objectivity, impartiality and independence, justice, trust, responsibility and goodwill, and openness and transparency.

We are committed to supporting and promoting the values and orientations that are of utmost importance to the OBVIA community:

### **Equity, Diversity and Inclusion : Essentials for the establishment of greater social justice**

The rise of AI and digital technology impacts the most vulnerable people. There production of biases and discrimination, the underrepresentation of certain populations and social justice issues are central concerns of

OBVIA's work. We aim to create an inclusive culture and environment to ensure that everyone has a say.

### **ImplicatioSocietal involvement: a conditionfor democratic deliberation and consciousness-raising**

OBVIA involves all stakeholders in its work and the major debates surrounding the development of AI and digital technology. OBVIA is also committed to getting involved on society's behalf in public debate and consultations to provide scientific and analytical support to decision-makers.

### **Interdisciplinarity and Intersectorality: A co-created research approach**

OBVIA's researchers come from the humanities, science and engineering, and health fields, taking an interdisciplinary and intersectoral approach to their work with more than 100 partners. We believe that sharing our expertise and knowledge is essential in order to address the challenges of designing and deploying efficient and responsible digital tools.

### **International Collaboration: Maintaining a dialogue on global issues**

By taking part in international initiatives and developing major collaborations with research centres, universities and companies abroad, OBVIA firmly anchors its work and fosters a collaborative and global approach to address the societal issues raised by the development of AI and digital technology.



# TEAM



**Lyse Langlois**  
General  
Director

As a full professor in the Department of Industrial Relations, Lyse Langlois has served as the General Director of the International Observatory on the Societal Impacts of AI and Digital Technology (OBVIA) since 2018, as well as the Director of the Institute of Applied Ethics (IDÉA) at Université Laval since 2016.

Her areas of interest include the formalization of ethics, the notions of sensibility, leadership and ethical issues, and the social and ethical impacts of artificial intelligence and digital technology.



**Guillaume Macaux**  
Scientific  
Advisor



**Nicolas Martin**  
Projects and  
Partnerships  
Manager



**Sophie Girard-Boily**  
Communications  
Manager



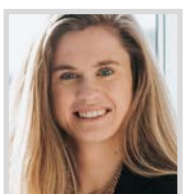
**Réjean Roy**  
Special Projects  
Advisor



**Jean-Louis Denis**  
Strategic  
Advisor



**Josée Nadeau**  
Administrative  
Assistant



**Eve Gaumont**  
Director of the  
Innovative Ideas  
Incubator Program



**Steven Ouellet**  
Scientific  
Advisor

# HIGHLIGHTS 2019-2020

**Launch of the  
Observatory by the  
Chief Scientist**  
December 3, 2018



**Mission in  
Oxford and Paris**

February 26 - March 6, 2019

Presentation of OBVIA and the development of partnerships with institutions, research centres, and researchers from Oxford University (Future of Humanity Institute, Oxford Internet Institute) and Paris (UNESCO, INRIA, LAAS-CNRS).

**Signing of a collaboration agreement  
with OECD during the International  
Economic Forum of the Americas in  
Montreal**

June 10 - 12, 2019

Signing of a historic collaboration agreement between Université Laval and the Organisation for Economic Co-operation and Development (OECD) calling on OBVIA's expertise in advancing knowledge on the societal impacts of AI on employment, the world of work, and the economy.



**Mission in  
Germany**

June 17 - 21, 2019

At the invitation of the German National Foreign Affairs Office, meeting with numerous stakeholders from the research community (Max Planck Institute for Intelligent Systems, Global Ethics Institute, Bosch Center for AI, PorscheBerlin, Center for Digital Transformation, IG Metall, and more)

**Mission in Boston**

September 9 & 10, 2010

Meeting with researchers from the MIT Computer Science and Artificial Intelligence Lab, Northeastern University, University of Massachusetts, the Humanity Centered Robotics Initiative at Brown University, the Berkman Klein Center at Harvard University, Worcester Polytechnic Institute, and the Boston Chamber of Commerce bringing together the region's technological companies.



### Launch of the AI Civic Forum

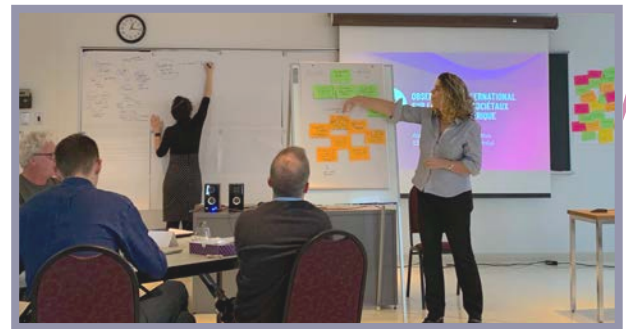
November 11 – 13, 2019

During the second Paris Peace Forum, OBVIA, The Future Society, MILA, and Algora launched a joint platform initiative for civic participation in AI, combining capacity-building, online consultation, and face-to-face deliberation.

### Global Forum on AI for Humanity

October 28 – 30 octobre, 2019

Participation of multiple researchers in the Global Forum on AI for Humanity which brought together experts from around the world in Paris to discuss issues surrounding AI and humanity, and explore potential global partnership initiatives. OBVIA is part of the scientific committee responsible for the programming of the Global Forum and was invited by President Macron to a dinner with the research community at the Élysée Palace.



### First competition for the "Supporting the Next Generation" grant program

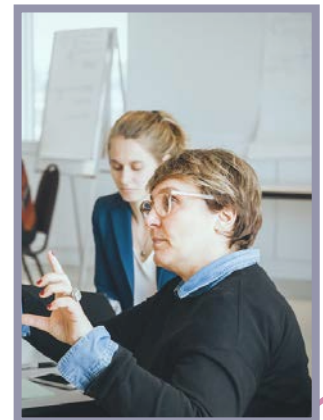
June 28 – Sept. 30, 2019

Seven students received grants, from the bachelor's to postdoctoral levels, recognizing their academic excellence and the innovative and interdisciplinary potential of their work in the field of the societal impacts of AI and responsible innovation.

### Day of Collective Reflection

November 15, 2019

All of the co-heads of the research themes and functions came together for a reflective workshop to further the development of a community of thought. The day-long activity also helped participants identify the orientations and priority themes for the scientific program.





**Participation in TEDxQuébec**

January 11, 2020

Public presentation by Lyse Langlois: "What kind of world do we want to live in? Will AI serve the human being, or the opposite?"

**Component 1 of the Call for Innovative Projects (2019-2022)**

June 28 – December 18, 2019

The first three projects led by interdisciplinary research teams each received funding of nearly \$160,000 for three years.

**Support for the Secrétariat du Conseil du trésor**

Since November 2019

Numerous researchers are providing support to Quebec's Secrétariat du Conseil du trésor to develop a strategy for the introduction of AI into public administration.



**Mission at University Côte d'Azur**

November 20 – 22, 2019

Participation in the Soph.IA Summit and signing of the Montreal Declaration, launch of the Observatory on the Economic and Social Impact of Artificial Intelligence (Observatoire des impacts technologiques, économiques et sociétaux de l'IA et du numérique—OTESIA) and official signing of a close collaboration agreement between OBVIA and OTESIA.



**Symposium on the Future of Work with the Rise of AI**

January 22, 2020

Developed in collaboration with the Interuniversity Research Centre on Globalization and Work (Centre de recherche interuniversitaire sur la mondialisation et le travail—CRIMT) and Element AI, this symposium provided an opportunity to initiate a dialogue between union representatives, researchers, and AI developers on the changes triggered by the deployment of AI in the workplace and to identify ways of ensuring oversight.





### International Symposium on Responsible Innovation in Digital Health

January 29 & 30, 2020

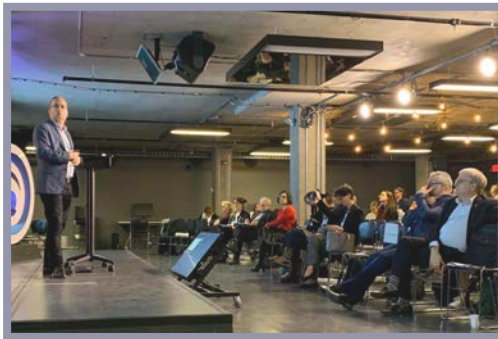
Multiple OBVIA researchers participated in the symposium organized by the Digital Health Consortium (Consortium Santé Numérique) to share their work on responsible innovation in digital health and to discuss opportunities, obstacles, and new avenues for exploration.



### Symposium on Artificial Intelligence and Collective Intelligence: Knowledge-sharing for responsible innovation

February 4, 2020

In collaboration with FRQ and Unisoft-Laforge, this first OBVIA symposium was an opportunity to discuss the role of the intersectoral approach as it applies to the integration of AI into society, to present the work supported by OBVIA and other stakeholders studying the societal impacts of AI and digital technology, and to promote knowledge-sharing and projects that put AI, digital technology and collective intelligence at the service of all.



### Launch of the 2nd component of the Call for Innovative Projects (2020-2023)

February 4 - May 1, 2020



### Establishment of a Special Committee on COVID-19

March 2020

With a special grant from FRQ, OBVIA created a special committee and launched multiple projects on the effects of artificial intelligence systems and digital tools deployed to fight the spread of COVID-19.

# RESEARCHER PROFILES



OBVIA is an open research network distinguished by its ability to bring together a large number of researchers with varied expertise invested in studying and analyzing the social, legal, and ethical impacts of AI and digital technology. Over the past year, more than fifty researchers from Quebec, Canada, and abroad were admitted by the scientific committee as research members.

There are now more than 200 researchers from three research sectors (humanities and social sciences, sciences and engineering, and health) working in interdisciplinarity and intersectorality within seven thematic areas of research.

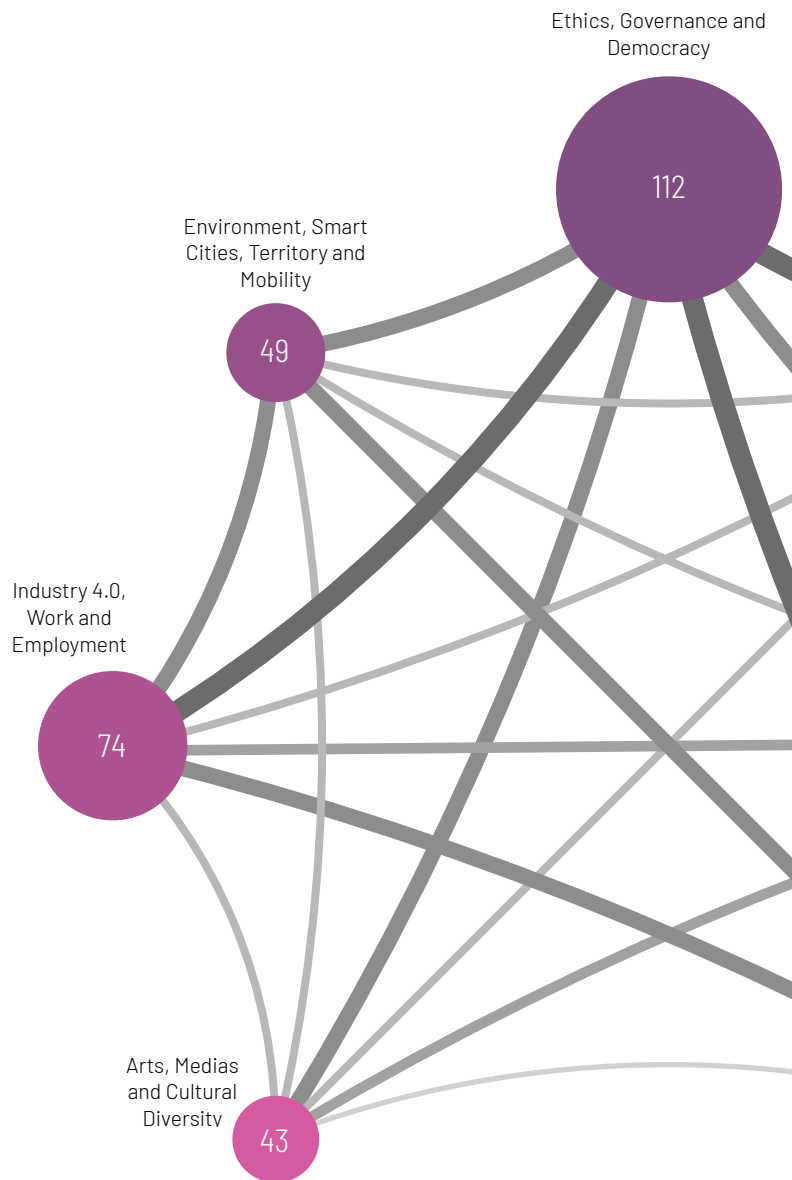
Together, they participate in OBVIA's activities and contribute to its scientific development by supporting its functions and areas of research and participating in quality research co-productions.

Researchers have access to resources and knowledge that promote reflection, collaboration, and interconnections to develop research projects, and organize activities and initiatives focusing on the societal impacts of AI and digital technology.

*Researchers can participate in activities and work being completed in multiple areas of research. This figure highlights the importance of interdisciplinarity in OBVIA's scientific approach.*

*The seven circles represent the number of researchers participating in projects on the different research themes.*

*The lines connecting the circles represent the number of researchers participating in work being completed in two areas of research.*





Law, Cyberjustice  
and Cybersecurity

41

Education and  
Empowerment

53

Sustainable Health

95



# FUNCTIONS

## Research and Creation

OBVIA's Research and Creation function carries out research projects that enrich knowledge about the societal impacts of AI and digital technology, in particular through calls for innovative projects and a grant program to support the next generation of researchers.

### Day of Collective Reflection

In collaboration with the Deliberation function, the co-heads of the Research and Creation function organized a day of collective reflection to bring together the co-heads of all of research themes and functions.

The workshop's objective was twofold: on the one hand, to stimulate reflection on responsible innovation, a concept at the heart of OBVIA's mission, and on the other hand, to define the outline of a scientific matrix and the next themes that will structure next year's programming and scientific orientations.



**Philip Jackson**

Professor in the School of Psychology, Université Laval



**Pascale Lehoux**

Professor in the School of Public Health at Université de Montréal

The workshop provided an opportunity for AI researchers and experts to discuss the major issues they have encountered while participating in different focus exercises on the role and functions of OBVIA's model.

The meeting made great strides in developing a community of thought among the researchers. It also helped define the scientific program's orientations and priority themes, as well as the challenges of running an interdisciplinary research program.





## Supporting the Next Generation Grant Program

In 2019, OBVIA launched the first competition for the Supporting the Next Generation grant program to benefit students at the college level, all the way to PhDs and postdoctoral fellows. The program aims to encourage students with outstanding academic records whose project shows innovative and interdisciplinary potential to undertake or pursue research or research-creation activities on the societal impacts of AI with a focus on responsible innovation.

The program provided support to seven students and first-year researchers.

The second competition, launched in April 2020, will provide nearly \$400,000 in grants to approximately twelve students from the college to postdoctoral levels. In partnership with IVADO (Institut de valorisation des données), \$60,000 per year in new funding will be available for a postdoctoral fellowship on the issues of power, inequality, and discrimination in AI.

The program continues to grow and new grant opportunities in partnership with other public and industrial players in the ecosystem are being developed.

### Our 2019-2020 Recipients



**Cécile Petitgand**, postdoctoral fellow, Hub Santé-Policy, Organizations and Law (HPOD), Université de Montréal

Implementing AI systems in Academic Health Centers in Quebec: organizational and normative solutions to limit the risks and maximize the benefits of AI innovations.



**Carl-Maria Mörch**, Postdoctoral Fellow, Algora Lab (Mila-OBVIA)

Creation of practical tools for an ethical use of artificial intelligence



**Sandrine Lambert**, PHD Student in Anthropology, Université Laval

The socio-political potential of participatory processes in digital manufacturing laboratories: ethnography of techno-utopianism in Barcelona's Fab City



**Aude Marie Marcoux**, PHD Student in Administration, École des sciences de la gestion, UQAM

Adoption of AI Technologies and Business Ethics: the Input of a Normative Framework and Ethical Thinking on Organizational Practices



**Eve Gaumond**, Master's Student in Law, Université Laval

Cities jury: public deliberation on access to online judicial information



**Élisabeth Beauchamp-Chalifour**, Master's Student in Public Health, Université Laval

Seizure detection and tracking through portable technologies: Systematic Review and users' perceptions

**Marc-Antoine Linteau**, Bachelor's Student in Psychology, Université Laval  
Effect of eye contact on empathy in a simulated teletherapy session

## Call for Innovative Projects

OBVIA's calls for innovative projects aim to support research and creation in the areas of responsible innovation and the major societal transformations associated with digital technology and artificial intelligence. The calls for innovative projects aim to develop teams of OBVIA member researchers and involve young researchers in interdisciplinary and intersectoral projects.

The first component of OBVIA's call for innovative projects was launched in summer 2019 with a budget of \$500,000. Under the supervision of the co-heads of the Research and Creation function, submitted projects are evaluated by an international committee made up of evaluators from Quebec, Canada, and abroad. To ensure an interdisciplinary evaluation, all evaluators act as lead evaluator or examiner for all of the projects submitted. Three projects received funding within the framework of the first component.

The second component, launched in winter 2020, will fund six new projects beginning in summer 2020 for a total of \$750,000.

Four other components will be launched by 2022 for a total envelope of \$3 million to fund more than 20 projects ranging from one to three years between 2019 and 2024.

### Projets fundés dans le cadre du composant 1 - 2019-2022



**Placing AI at the service of the Diversity of Cultural Expressions: an exploration of the conditions to be fulfilled for algorithms recommendation to promote the discoverability of Quebec literary works in the digital environment**

Véronique Guèvremont (Univ. Laval)  
René Audet (Université Laval)  
Pierre-Luc Deziel (Université Laval)  
Audrey Durand (Université Laval)  
Christian Gagné (Université Laval)  
Vincent Gautrais (Université de Montréal)  
Richard Houry (Univ. Laval)  
Audrey Laplante (Univ. de Montréal)



**Identify, measure and develop future skills: an interdisciplinary modelization assessing the impact of organizational transformations due to digital technologies and artificial intelligence on employment systems.**

Tania Saba (Université de Montréal)  
Félix Ballesteros-Leiva (Univ. Laval)  
Marie-Thérèse Chicha (Univ. de Montréal)  
Nolywé Delannon (Université Laval)  
Julie Dextras-Gauthier (Univ. Laval)  
Marie-Eve Dufour (Université Laval)  
Jaya Nalakantan (Dawson College)  
Laurent Ruhlmann (Dawson College)  
Suzanne Bruyère (Cornell University)  
Eddy Ng (Bucknell University)  
Mustafa F. Ozbilgin (Brunel B. School)  
Lucy Taksa (Macquarie Business School)



**AI "solutions" to global health challenges : an interdisciplinary case study to critically evaluate the development and implementation of an A.I. based tool for diagnosing tuberculosis, the world's leading infectious killer**



Faiz Ahmad Khan (Université McGill)  
Pierre-Marie David (Univ. de Montréal)  
Sabaa Khan (Univ. of Eastern Finland)

# Monitoring and Surveys



**Benoît Dostie**

Professor in the Department of Applied Economics at HEC Montréal



**Nathalie de Marcellis-Warin**

Professor in the Department of Math and Industrial Engineering, École Polytechnique de Montréal

The Monitoring and Surveys function organizes strategic scientific monitoring of data and work available internally and external to the Observatory to keep its finger on the pulse of Quebec's society with respect to the issues that the Observatory addresses.

As part of the Monitoring component, multiple initiatives were launched to facilitate the work of researchers, including a regularly updated inventory of initiatives related to responsible AI and its societal impacts in Canada and abroad. The inventory aims to identify the different organizational structures studying the impacts of AI and issues surrounding ethics and responsible governance of AI.

In addition, data sets that may be relevant to analyzing the societal impacts of AI and digital technology have begun to be identified, notably from sources at Statistics Canada and the Institut de la statistique du Québec.

Lastly, a mapping of the expertise held by OBVIA's researchers based on their academic training, research themes, and detailed areas of interest is underway. Ultimately, the mapping will allow for the creation of research clusters based on the researchers' fields of expertise, as well as the identification of potential interdisciplinary collaborations and opportunities in the research ecosystem on the societal impacts of AI in Quebec.

A research mandate for the Conseil Interprofessionnel du Québec has also begun within the framework of the Surveys function and in conjunction with the Industry 4.0, Work and Employment and Ethics research themes. In particular, through the development and administration of an online survey, the team is conducting an exploratory study among professionals and professional associations with the objective of better assessing the short and long-term risks, benefits, and concerns related to digital transformation.

Lastly, Baromètre CIRANO, whose objective is to gather and analyze data and annual surveys to better understand the concerns and risks perceived by Quebecers, has begun to address a number of questions related to the impacts of AI since 2018. Work is underway to reinforce the synergy between the work being done by OBVIA and Baromètre CIRANO on these issues.





# Public Policy



**Steve Jacob**

Professor in the Department of Political Science at Université Laval



**Daniel Weinstock**

Professor in the Faculty of Law at McGill University

The Public Policy function engages the Observatory and its researchers in major debates, consultations, and commissions on public policies on AI and digital technology and provides scientific and analytical support to public decision-makers.

The work led by researchers in the Public Policy function spearheaded the mapping of existing government artificial intelligence initiatives and strategies underway around the world. This research examines governmental orientations and mechanisms developed and/or implemented to promote the development of AI and respond to the ethical problems raised by its use. Through a literature review of a series of government strategies, the three-fold objective is to identify the objectives pursued by governments in the development of artificial intelligence, to list the problems raised by the use of AI by the public sector, and to identify and categorize the mechanisms implemented to ensure the responsible use of these technologies.

The work of the Public Policy function supported the Secrétariat du Conseil du trésor in the development of its strategy for the introduction of AI in Quebec's public administration by helping to identify the challenges to be overcome, exemplary practices to be implemented, and the benchmarks that must be set to ensure the effective and responsible use of AI by governments.

Multiple research themes contributed to the support provided to public decision-makers, specifically the notice filed with the Commission d'accès à l'information du Québec, a meeting with the Privacy Commissioner of Canada, and the work of the COVID-19 committee which could potentially influence public policy.



# RESEARCH THEMES

OBVIA's activities and work are structured around four research themes: Arts, Media and Cultural Diversity; Industry 4.0, Work and Employment; Environment, Smart Cities, Territory and Mobility; Ethics, Governance and Democracy; Law, Cyberjustice and Cybersecurity; Education and Empowerment; and Sustainable Health.

For each of the research themes, two co-heads are responsible for developing a scientific program based on the activities and research projects that structure their theme. Research themes may also overlap with other themes and functions to further the reflection on shared issues.

The eighth research theme, International Relations, Humanitarian Action and Human Rights, will begin its activities in 2020 at the initiative of Céline Castets-Renard and Karine Gentelet.

## Arts, Media and Cultural Diversity



**Colette Brin**

Professor in the Department of Information and Communication at Université Laval



**Véronique Guèvremont**

Professor in the Faculty of Law at Université Laval

AI and digital technology disrupt the arts, media, and culture, whether by enabling the creation of interactive work, facilitating the circulation of information (and false news), or serving both as an engine and obstacle to cultural diversity.

In this first year, multiple researchers on this theme participated in an OBVIA-funded interdisciplinary research project aiming to promote diversity of cultural expression and the discoverability of Quebecois literary works in the digital environment.

Researchers on the theme aim to contribute to the conversation initiated by UNESCO during its General Conference in November 2019 on the adoption of a normative instrument on the ethics of AI in the next two years. The theme plans to submit a written contribution presenting recommendations and guidelines backed by the group's diverse fields of expertise. The Deliberation function is also contributing to this endeavour.



## Industry 4.0, Work and Employment



**Christian Lévesque**

Professor in the Department of Human Resources Management at HEC Montréal

AI and digital technology are the motors behind a new industrial revolution. The result is a recomposition of tasks and the emergence of new forms of work associated with the spread of AI and digital systems. The rise of technology also affects business models, how work is organized, human-machine complementarity, as well as workers' well-being and safety.

Researchers on this theme have identified transversal themes and held a symposium on the future of the labour market with the emergence of AI, in collaboration with the Interuniversity Research Centre on Globalization and Work (Centre de recherche interuniversitaire sur la mondialisation et le travail—CRIMT) and Element AI. The symposium brought together union representatives, researchers, university students, and AI developers via workshops and plenary sessions to identify the major issues surrounding the transformation of work by AI.

An OBVIA-funded research team has also begun a project aimed at providing an overview of the nature and extent of organizational transformations resulting from AI and digital technology by targeting three sectors in Quebec (high technology, services, and manufacturing), assessing the impact of these transformations on skills needs and identifying actions to meet those needs by taking into account economic and strategic priorities and the social impacts of these organizational changes.

## Environment, Smart Cities, Territory and Mobility



**Christophe Abrassart**

Professor in the School of Design at the Faculty of Environmental Design at Université de Montréal



**Thierry Badard**

Professor in the Department of Geomatics at Université Laval

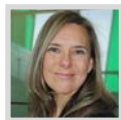
AI and digital technology can be both lifesaving and destructive to the environment. While data centres and planned obsolescence strategies contribute to climate change, technology can facilitate cities' transition to smarter and more sustainable mobility solutions.

OBVIA's researchers determined their research themes and took part in the Journée québécoise de valorisation des données organized by the Centre de recherche en données massives (CRDM) and the Institut de valorisation des données (IVADO) with the organization of a session on the environment and AI.

In collaboration with OBVIA's Innovative Ideas Incubator, researchers on this theme designed and led two co-design workshops to encourage the student cohort to generate new ideas to improve the 211 helpline. In addition, they were prompted to develop a mechanism more deeply integrated into smart cities to connect people and promote community through digital technology.

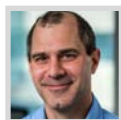


## Ethics, Governance and Democracy



**Allison Marchildon**

Professor in the Department of Philosophy and Applied Ethics at Université de Sherbrooke



**Bryn Williams-Jones**

Professor in the School of Public Health at Université de Montréal

Numerous ethical charters throughout the world propose an ethical framework for AI and digital technology. These principles, established by various stakeholders from academia, industry, civic organizations, and public organizations, present issues for their application within companies and in civil society and call for reflection on the ethical governance of technology.

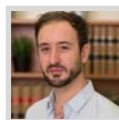
In addition to conducting a review of the literature on AI and the ethical issues of governance and democracy, as well as on the operationalization of the principles of the Montreal Declaration for the Responsible Development of AI, researchers on this theme organized and participated in several activities to stimulate reflection on the ethical issues surrounding AI. Specifically, a number of “bioethics cafés” were organized as well as a workshop entitled “Artificial Intelligence: Between philosophy and bioethics” in collaboration with the Centre de recherche en éthique (CRÉ). In collaboration with ACFAS (Association canadienne-française pour l'avancement des sciences), researchers on this theme organized a symposium on “Ethics and Artificial Intelligence: Principles, practices and modes of governance.” The event, which had to be postponed, will bring together approximately 20 OBVIA member researchers. These opportunities for dialogue help structure the ideas generated by researchers, students, AI experts, and civil society.

## Law, Cyberjustice and Cybersecurity



**Karim Benyekhlef**

Professor in the Faculty of Law at Université de Montréal



**Pierre-Luc Déziel**

Professor in the Faculty of Law at Université Laval

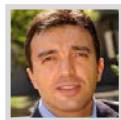
AI and digital technology can help lower costs and delays in the justice system. But their use poses risks in terms of discrimination and invasion of privacy. The dangers of the fraudulent manipulation of data and tools must also be countered.

Researchers on this theme are primarily interested in issues of equity and the legality of decision-making processes conducted using AI algorithms and personal information, particularly in the fields of insurance, health, culture, and criminal law. Their work aims to understand how algorithms are used to make decisions that can have a significant impact on people's lives, analyze the deployment of decision-making tools according to current law, and identify possible forms of regulation to provide stronger oversight of the use of these tools, such as laws, contracts, and technical standards.

In particular, the researchers' expertise solicited by the Office of the Privacy Commissioner of Canada and the Commission d'accès à l'information du Québec in the context of consultations on the protection of personal information and artificial intelligence, resulting in the production of recommendations in the form of a report entitled “Rethinking the Protection of Personal Information in Light of the Challenges Posed by AI.”



## Education and Empowerment



**Thierry Karsenti**

Professor in the Faculty of Education at Université de Montréal



**Karine Gentelet**

Professor in the Department of Social Sciences at Université du Québec en Outaouais

Learn, debate, create and innovate. Technology will play a role in turning today's youth into tomorrow's citizens. We must reflect on how to improve digital literacy and ways to mobilize AI and digital technology to support learning and increase accessibility to education and training.

A number of collaborative projects were developed by researchers on this theme, focusing in particular on the use of AI to foster academic perseverance and success among learners in the context of distance learning. The function also contributed to the mapping of existing educational resources leveraging AI. This project, involving multiple researchers on the theme, was developed according to a rigorous methodology and a review of the literature on the issue. Ultimately, the platform will be available to all of OBVIA's research themes.

Lastly, researchers also helped organize and participated in a symposium on the advantages, challenges, and use of artificial intelligence in education held during the 8th annual Sommet du numérique en éducation.

## Sustainable Health



**Philippe Després**

Professor in the Department of Physics, Physical Engineering and Optics at Université Laval



**Aude Motulsky**

Professor in the School of Public Health at Université de Montréal

Artificial intelligence and digital technology allow for earlier diagnoses and treatments that are best adapted to individual needs. But, if these technologies are to fulfil their promises, patient data must be securely managed.

The theme of data governance is a top priority for researchers providing their range of expertise in collaboration with researchers in the Law, Cyberjustice and Cybersecurity function.

A number of projects have been launched as a result of the new collaborations that OBVIA has spawned. Specifically, a team is leading an OBVIA-funded interdisciplinary case study on the development and implementation of an AI-based tool to diagnose tuberculosis.

In the context of the COVID-19 pandemic, researchers on this theme came together on a number of projects to provide support to decision-makers.



# PARTNERSHIPS AND COLLABORATIONS

OBVIA pools the varied and recognized expertise of nine universities and nine colleges in Quebec on the societal impacts of AI and digital technology. This network relies on a vast ecosystem of partners in Quebec, Canada, and abroad who support the development of knowledge and expertise on the responsible design and use of AI and digital technology.

Through interdisciplinary and intersectoral collaboration, the researchers share their expertise and knowledge to compare and contrast different perspectives. The result is a more thorough analysis of the issues and an identification of solutions to take advantage of the opportunities presented by the development of AI and minimize the undesirable effects that it could have on our societies.

Our partners include research centres, civil society organizations, public and parapublic bodies, international organizations, and private companies.

These partners support OBVIA's work and collaborate in numerous ways, for example, by participating in research projects conducted by member researchers or by funding grants in partnership with OBVIA for students and new researchers.

Other collaborations have taken shape through the organization of activities such as symposiums, workshops, study days, and publications, allowing for collective reflection and a better dissemination of knowledge.

This year, we organized two large-scale symposiums. The first, in collaboration with the Fonds de recherche du Québec and Ubisoft-La Forge, addressed intersectorality and collective intelligence through a discussion on the role of an

intersectoral approach to integrating AI in society. The symposium also fostered knowledge-sharing among the research community, companies, and citizens from all sectors for the responsible development of AI and digital technology. The second symposium was organized by researchers on Industry 4.0, Work and Employment in collaboration with CRIMT and Element AI, focusing on the future of work in the age of artificial intelligence.

OBVIA is also leading interventions, providing support, and producing targeted work within the framework of partner-funded mandates. These collaborations foster the implementation of exemplary practices and the development of projects respecting the principles of responsible innovation. This year, multiple teams were formed around different research mandates to combine the researchers' interdisciplinary expertise and support partners in the development of ethical and responsible practices.

## **Report on Artificial Intelligence, Solidarity and Insurance in Europe and Canada with OPTIC**

OBVIA members contributed to the development of a report on artificial intelligence, solidarity, and insurance in Europe and Canada, proposing guiding principles and best practices for AI in the insurance sector. The Human Technology Foundation and its OPTIC network (independent, non-profit institutions) coordinated the report in collaboration with partners in Canada and France.

### **Support for the development of a strategy for introducing AI in public administration by the Secrétariat du Conseil du trésor**

In collaboration with the Institut Intelligence et données (IID), OBVIA's Deliberation and Public Policy functions provided support to Quebec's Secrétariat du Conseil du trésor for the development of a strategy for introducing AI in public administration. Numerous research notes, case studies, and awareness-raising and deliberation activities were completed, and recommendations and courses of action were presented for the implementation of the AI introduction strategy.

### **TechnoMontréal**

OBVIA is supporting TechnoMontréal in the development and establishment of a think tank on the opportunities that certain AI-based technologies will generate, as well as on the various effects that these technologies could have on the functioning of major sectors of Quebec's economy. Three focus areas were established:

- Opportunities presented by the emergence of new capabilities for the acquisition and dissemination of geospatial data;
- The positive benefits that the rise of AI may have on the health sector;
- The ways in which buildings integrating state-of-the-art technologies could transform the lives of the people who live in them.

### **Study on the transformations occurring in professional associations in collaboration with the Conseil interprofessionnel du Québec (CIQ)**

The CIQ mandated OBVIA's Monitoring and Surveys function to lead a wide-scale exploratory study on professional associations. The study aims to understand the transformations taking place in associations and professions, how the digital shift is being perceived, and the increasing use of AI, as well as perceptions of the risks and opportunities of these new practices.

### **Support for the Société québécoise d'information juridique (SOQUIJ) in the establishment of a one-stop legal information platform**

OBVIA is providing support to SOQUIJ in the design, adoption, and implementation of best practices in AI as part of the development of a one-stop, multi-channel legal information platform, a project funded by the Ministère de la Justice du Québec. The purpose of the non-commercial digital platform is to inform, guide, and support citizens facing life events. Based on their needs, citizens will have access to coordinated and personalized tools to assist them in the legal process.

# PARTNERS ECOSYSTEM

## Research centers or groups

## Civil society organizations

Public or  
parapublic actors

Companies or  
groups of  
companies

International partners

**Public or parapublic actors:** Ville de Sherbrooke, Ville de Québec, Commission des droits de la personne et des droits de la jeunesse Québec, Commissariat à la protection de la vie privée du Canada / Office of the Privacy Commissioner of Canada, CHU de Québec Université Laval, CHUM ÉCOLE DE L'INTELLIGENCE ARTIFICIELLE EN SANTÉ Centre hospitalier de l'Université de Montréal, Montréal, Conseil du statut de la femme Québec, Institut national des mines Québec.

**Companies or groups of companies:** SOQUIJ Intelligence juridique, Secrétariat du Conseil du trésor Québec, Commission d'accès à l'information du Québec, stradigi AI, OPTEL, emo Sciens, BANQUE NATIONALE, Google Brain, imagia, EY, Roland Berger, Microsoft, techno MONTREAL, ELEMENT AI, UBISOFT, CIO STRATEGY COUNCIL, THALES, VIDEOTRON, DeepMind, COVEO, UNESCO, FONDATION ABEONA DATA SCIENCE FOR FAIRNESS & EQUALITY, b.com, IBM, MONTRÉAL INVIVO, SPHERE AI, European Commission, European Group on Ethics in Science and New Technologies to the European Commission, OCDE, ENS ÉCOLE NORMALE SUPÉRIEURE, JALISCO, SCALE AI.

**International partners:** USC Center for Artificial Intelligence in Society, Good In Tech, CENTER FOR TECHNOLOGY IN GOVERNMENT UNIVERSITY AT ALBANY State University of New York, goodcorporation, RESPONSIBLE ROBOTICS, Tecnológico de Monterrey, MIT CSAIL, CFI LEVERHULME CENTRE FOR THE FUTURE OF INTELLIGENCE, SORBONNE UNIVERSITÉ, UNIVERSITÉ CÔTE D'AZUR, GOVLAB, UNIVERSITY OF PASSAU, IRIDIA, INSTITUTE DATAIA Data Science, Intelligence & Society, C MINDS, ULB UNIVERSITÉ LIBRE DE BRUXELLES, Future of Humanity Institute UNIVERSITY OF OXFORD, IEA PARIS INSTITUT D'ÉTUDES AVANCÉES DE PARIS.



# INNOVATIVE IDEAS INCUBATOR

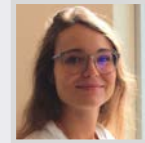
The Innovative Ideas Incubator (ID) is a project developed by and for students. Launched in 2019, it provides an interdisciplinary cohort of twelve graduate students with a structure and means to collectively reflect on ways to maximize the positive impacts of AI on society. Based on this reflection, students will develop innovative initiatives that use AI for the common good.

The Incubator is led by three guiding principles:

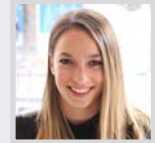
- ▶ **Train the next generation**
- ▶ **Collaborate with community organizations**
- ▶ **Commit to the common good**



Eve  
Gaumond



Émilie  
Guiraud



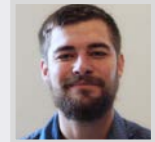
Justine  
Dima



Lucas  
Delon



Grégory  
Fortin-Vidah



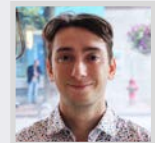
William  
Brisson



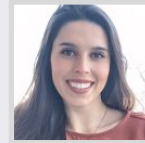
Khadija  
Essaïed



Keven  
Brisson



Sébastien  
De Blois



Alexandra  
Prigent



Pierre  
Berthy-Paul



Philippe  
Racicot



## Activities Summary

Since its launch, the Innovative Ideas Incubator has held 10 workshops and focus discussions. Five of these sessions served as collaborative incubation sessions where students came together to discuss their visions of the common good and the role of AI in accordance with this ideal. They also generated a number of innovative project ideas. The sessions provided an opportunity to begin working in interdisciplinarity while developing a shared vocabulary and points of reference.

Four intensive work days were also organized. The first was held during the FabriQC social innovation fall school where students had an opportunity to meet with nearly one hundred citizens and community stakeholders to learn about the community's needs. The session served as inspiration for the development of an innovative project.

Students also took part in two prospective co-design workshops, an innovative method using serious play to elucidate the unknown and tease out new possibilities. Five professors with expertise in AI and its societal impacts, as well as the coordinator of the 211 information and referral service for the Capitale-Nationale and Chaudière-Appalaches regions, spoke at the workshops.

An immersive day on the 211 service was also held. Students received intensive training on working within the community organization, and spent a half-day observing a community worker on the job.

The incubation method used was subject to a methodological analysis led in collaboration with Professor Christophe Abrassart. A methodological workbook drawing from the experience of the first cohort will be available in the coming year.

## An Innovative Method

The Innovative Ideas Incubator has adopted the prospective co-design method developed by Professor Christophe Abrassart. This method is based on three key components:

**CO** : Actively involve stakeholders from different horizons

**DESIGN** : Conceive of scenarios to trigger discussion, explore the unknown, and spur a cognitive "de-fixation".

**PROSPECTIF** : Project oneself into a possible future (five years) to imagine a more desirable future and reflect on innovative ways of getting there

To date, two prospective co-design workshops using a serious-minded card game specifically designed for the 211 project have taken place. The workshops served to decompartmentalize reflection in order to move beyond the paradigm of "optimization of the status quo."

## 211 Project

The Innovative Ideas Incubator has chosen improving the 211 service as its innovative project.

The 211 service provides information and referrals regarding community, public and parapublic services. The service aims to curb poverty and social exclusion by directing vulnerable individuals to local social and community resources.

The work of 211's agents can be difficult and stressful. They must find the best referral in a database containing thousands of organizations while considering the caller's individual situation and each organization's specific exclusions.

The Innovative Ideas Incubator is developing solutions to use technology for human benefit to increase the support provided.

# COMMUNICATIONS

With a community of more than 200 researchers and approximately 100 partners, OBVIA has positioned itself as a leading research network on the study of the societal impacts of AI and digital technology, both in Quebec and beyond.

We have developed an identity, media, and tools that showcase and promote the scientific productions and activities of this dynamic community and strengthen the links between all the actors in our community. OBVIA promotes the work and activities of its researchers, as well as quality research and activities external to its network that may be of interest to our researchers to fuel the research and reflection already underway.

By relaying this information, OBVIA's communication tools not only make it an essential reference resource for the research community on the societal impacts of AI and digital technology in Quebec and internationally, but also keep researchers and partners informed of current events related to these issues.

Through the content produced and distributed, OBVIA also aims to foster new collaborations among its member researchers and with its partners, in addition to increasing public mobilization and awareness of its mission.

## OBVIA Website

Our website has become an essential reference tool for our community of members and for those curious about learning more about OBVIA, its mission, and its values. It is a one-stop location for us to list all our activities and our many news pieces, posts, and publications on the work of our functions and eight research themes.

We also share important news, major upcoming events, our various calls for innovative projects, our scholarship competitions, and information on major initiatives such as the Innovative Ideas Incubator.

With over 1,000 monthly readers, OBVIA's website has become the main showcase of our mission and activities.





## OBVIA Newsletter

Our newsletter informs our readers—including researchers, partners, citizens, and public decision-makers—of recent work and news from OBVIA and its partners, upcoming events, and relevant reading related to its mission.

Between OBVIA's creation in May 2018 and March 2020, we have produced eleven newsletters. We surpassed 700 subscribers in March 2020, proof that OBVIA's mission and activities have garnered the interest not only of researchers, but also the general public.

## Social Media

We maintain daily contact with our community via our social networks (Twitter and LinkedIn). They are essential to OBVIA's influence and serve as a space for direct and privileged interaction with the 1,300 or so subscribers who follow us on these networks, whether they are researchers, partners, or simply people with an interest in our mission.



OBSERVATOIRE INTERNATIONAL  
SUR LES IMPACTS SOCIÉTAUX  
DE L'IA ET DU NUMÉRIQUE
Bulletin

**Le mot de la directrice générale**

Un jalon important pour l'OBVIA a été franchi au début du mois: les premiers appels à projets ont été clôturés le 30 septembre dernier et ils sont en cours d'évaluation. L'annonce des résultats se fera en novembre. Les lauréats des bourses d'appui à la relève de l'OBVIA ont aussi été récemment annoncé tant par le biais de nos réseaux que sur le site du FRQ.

En ce qui a trait aux étapes à venir, la prochaine réunion du comité scientifique se tiendra le 22 octobre 2019 à Montréal dans les locaux du CIRANO. Enfin, à la suite de la mission à Boston dont nous vous parlons dans le dernier Bulletin, une collaboration a été initiée avec CSAIL-MIT. Un premier atelier de réflexion (workshop) entre les deux organisations se déroulera au printemps 2020 avec des chercheurs de l'OBVIA !

Lyse Langlois, Ph.D.  
Directrice générale

**Les nouvelles de l'Observatoire**

**Visite du Consulat général du Royaume-Uni de Montréal à l'OBVIA**

L'OBVIA a eu le plaisir de recevoir Chloé Jayne Adams, conseillère générale du Royaume-Uni à Montréal et Mario Rivero Huguet pour discuter de collaborations futures. Philippe Després et Jean-Louis Denis, chercheurs responsables de l'axe santé, ont présenté leurs travaux et les projets en cours et ceux à venir avec le Royaume-Uni.

**Des nouvelles de nos chercheur(e)s**

**Les nouveaux états d'être**

Dans le cadre du projet les nouveaux états d'être, **Pascale Lehoux** signe un essai intitulé "Rendre visible l'invisible dans Aiship: réflexions sur les arts visuels et l'innovation responsable en santé". L'objectif de cet essai est d'examiner les moyens par lesquels les arts visuels peuvent aider à révéler et à rendre plus tangible le pouvoir de transformation des algorithmes.

**Académie de la transformation numérique**

Christian Gagné et Lyse Langlois de l'OBVIA ont participé au lancement de l'Académie de la transformation numérique (ATN) le 30 septembre dernier. Ils ont discuté des défis auxquels font face les organisations à l'ère du numérique, du développement de la capacité à innover par le numérique et de l'évolution des

# GOVERNANCE

During this founding year, OBVIA's General Management set up a permanent team to support the realization of our mission and activities, and collaborated with the Interim Steering Committee to develop and implement a governance structure and rules to organize its internal operations in the service of its scientific mandate.

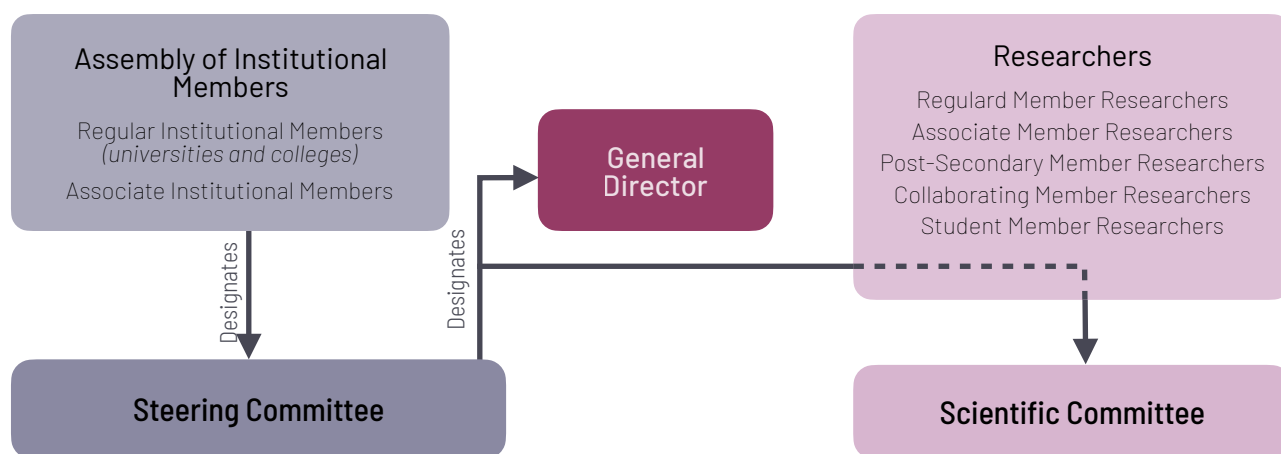
The internal governance rules adopted at the last meeting of the Interim Steering Committee on November 27, 2019 led to the establishment of a permanent Steering Committee composed of six delegates designated by the regular institutional members (member universities, colleges and cégeps) and four delegates co-opted from among the representatives of the associate institutional members.

In early 2020, the Steering Committee appointed the Honourable Louise Otis, Assistant Professor at McGill University's Faculty of Law and former judge of the Quebec Court of Appeal from 1993 to 2009, as its Chair. Ms. Otis, who is involved in multiple international missions on governance and justice reform, is also President of the OECD Admini-

strative Tribunal and the Appeals Tribunal of the Organisation internationale de la Francophonie (OIF).

At the same time, the Scientific Committee, which is responsible for defining and applying OBVIA's scientific strategy in collaboration with General Management, met several times during this first year to structure the scientific program and establish objectives. The Scientific Committee consists of the co-heads of the research themes and functions, a post-secondary member researcher and, in the coming months, a student member researcher selected from among the OBVIA grant recipients. It is co-chaired by General Management and the co-heads of the Research and Creation function.

For certain tasks and specific files, sub-committees are set up within the Scientific Committee, in particular concerning the membership and integration of new researchers and the development of a partnership charter.



## STEERING COMMITTEE

### University and College Representatives



**Caroline Aubé**  
Director of Research and  
Knowledge Transfer, HEC  
Montréal



**Eugénie Brouillet**  
Vice-Rector of Research,  
Creation and Innovation,  
Université Laval



**Jean-Pierre Perreault**  
Vice-Rector of Research and  
Graduate Studies, Université de  
Sherbrooke



**John Halpin**  
Director General, John Abbott  
College



**Luc Thifault**  
General Director,  
Collège Jean-de-Brébeuf



**Marie-Josée Hébert**  
Vice-Rector of Research,  
Creation and Innovation,  
Université de Montréal



### Chair

**The Honourable Louise Otis**  
Mediator, Arbitrator in Civil  
and Commercial matters and  
International Administrative  
Judge

### Associate Institutional Member Representatives



**Béatrice Alain**  
General Director of the  
Chantier de l'économie  
sociale



**Marc Beaudoin**  
General Director of the  
Conseil interprofessionnel  
du Québec



**Amy Luers**  
Executive Director of  
Future Earth



**Jean-Noé Landry**  
General Director of Nord  
Ouvert

## SCIENTIFIC COMMITTEE

**Christophe Abrassart**, Professor in the School of Design at the Faculty of Environmental Design at Université de Montréal

**Thierry Badard**, Professor in the Department of Geomatics at Université Laval

**Karim Benyekhlef**, Professor in the Faculty of Law at Université de Montréal

**Colette Brin**, Professor in the Department of Information and Communication at Université Laval

**Céline Castets-Renard**, Professor at the Faculty of Civil Law at the University of Ottawa

**Philippe Després**, Professor in the Department of Physics, Physical Engineering and Optics at Université Laval

**Pierre-Luc Déziel**, Professor at the Faculty of Law at Université Laval

**Marc-Antoine Dilhac**, Professor in the Department of Philosophy at Université de Montréal

**Dominique Diouf**, Researcher at the Centre d'étude en responsabilité sociale et écocitoyenneté (CERSE), Collège Rosemont

**Benoît Dostie**, Professor in the Department of Applied Economics at HEC Montréal

**Karine Gentelet**, Professor in the Department of Social Sciences at Université du Québec en Outaouais

**Véronique Guèvremont**, Professor in the Faculty of Law at Université Laval

**Philip Jackson**, Professor in the School of Psychology at Université Laval

**Steve Jacob**, Professor in the Department of Political Science at Université Laval

**Thierry Karsenti**, Professor in the Faculty of Education at Université de Montréal

**Lyse Langlois**, General Director and Professor in the Department of Industrial Relations at Université Laval

**Pascale Lehoux**, Professor in the School of Public Health at Université de Montréal

**Christian Lévesque**, Professor in the Department of Human Resources Management at HEC Montréal

**Nathalie de Marcellis-Warin**, Professor in the Department of Math and Industrial Engineering at Ecole Polytechnique de Montréal

**Allison Marchildon**, Professor in the Department of Philosophy and Applied Ethics at Université de Sherbrooke

**Aude Motulsky**, Professor in the School of Public Health at Université de Montréal

**Marie-Christine Therrien**, Professor of Management at the Ecole nationale d'administration publique (ENAP)

**Daniel Weinstock**, Professor at the Faculty of Law at McGill University

**Bryn Williams-Jones**, Professor in the School of Public Health at Université de Montréal

The acronym OBVIA is derived from the French verb *obvier*.

**obvier** (verb) :

To prepare for a potential or unfortunate future event by taking all measures likely to avoid it or to deal with it in the best possible way, as the case may be, or to mitigate its effects.



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