



MEDTEQ⁺
L'INNOVATION POUR LA SANTÉ
INNOVATION FOR HEALTH

2023-2024 Annual Report

*Coaching
Validation
Financing*

Financial partners

Québec 

Canada 

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Message From the Chairman of the Board

"A year of transition, a springboard for innovation."

That, in a nutshell, sums up the essence of all MEDTEQ+'s achievements over the past year. There were many highlights during this period, making it difficult to list them all. But let's not forget:

We negotiated a five-year outsourcing agreement with our partner Innovitech to establish a new basis for collaboration and, in particular, to pursue one of the key aspects of our mission as an industrial research cluster for the Ministère de l'Économie, de l'Innovation et de l'Énergie.

Strategic planning involved a multitude of stakeholders, both within the organization and with members of the healthcare innovation ecosystem. Over the next five years, the results of this process will shape the direction, actions and efforts of the organization as it seeks to extend its influence far beyond the scope of its activities, which were initially defined over ten years ago.

Redesigned governance to support the consortium's aspirations and ambitions.

The pursuit of significant mandates, most notably the launch of the envisAGE program designed to promote innovation focused on the well-being of seniors across Canada.

A summit held in February 2024 that brought together nearly 500 stakeholders concerned with promoting tech-

nological innovations and showcasing our promoters here and abroad.

And the resolution of other equally important mandates: establishing RÉIS, evaluating several calls for projects, and providing support in association with various partners, such as the Bureau de l'Innovation of the Ministère de la Santé et des Services sociaux and the Institut TransMedtech.

These initiatives demonstrate the ever-growing influence of MEDTEQ+, whose membership now includes over 260 companies, healthcare institutions, research centres and clinical trial coordination centres.

MEDTEQ+ is creating new jobs, training numerous master's and doctoral students, launching new companies, and above all, promoting ideas and creating value in the healthcare ecosystem that will ultimately benefit the quality of care received by the public.

I'm very proud to contribute to and share in the success of MEDTEQ+. As a member of the consortium's governance structure since it was established in 2012, I appreciate every moment spent with this team mobilized by our mission dedicated to promoting innovation in a sector where the impact of the mission makes a real difference.



François Bastien
Chairman of the Board of Directors

MEDTEQ+

Message from the Chief Executive Officer

"Already one year spent among the wonderfully dynamic MEDTEQ+ team."

It's already been a year since I joined the dynamic MEDTEQ+ team. During this time, I have been able to ascertain the crucial importance of our support for the life science ecosystem and the extent of the collaborations established over the years. I would like to honour the exceptional work of my predecessor, Diane Côté, who strategically positioned our organization. We continue to follow the path she laid out for us thanks to the unwavering commitment of the entire MEDTEQ+ team. Without their support, it would have been difficult for me to fully grasp the challenges facing entrepreneurs in the development of healthcare technologies and to successfully pursue our mission.

Over the past year, MEDTEQ+ has made a number of impressive advances. This report highlights the significant impacts created by our organization, our central role in the Canadian healthcare technology sector and the many milestones achieved during this pivotal year. Our achievements include the submission of the RÉIS strategic plan and the launch of a first call for projects at the first envisAGE Forum in Toronto, two major initiatives carried out by our teams in association with our partners. Our strategic planning exercise was one of the highlights of 2023-2024. This accomplishment enabled us to survey the ecosystem, reflect on our positioning and define a concrete action plan

to better support our members. The MEDTEQ+ Innovation Summit also mobilized over 500 players from the innovation ecosystem. We also forged new strategic partnerships with the Canadian Space Agency, Brain Canada, iGan, First Line in Health, Osler, OBIO and many others. I'm extremely proud to lead this team!

At the start of the new year, I look to the future with renewed enthusiasm, as our action plan is clear and ambitious, yet realistic. As you will read in this report, we are committed to re-evaluating the services we offer to better meet our members' needs, continuing to forge strategic partnerships that benefit our entrepreneurial community and creating exceptional networking opportunities. In a time of financial optimization and political change, it is essential to rigorously define which actions we prioritize to maximize our impact.

MEDTEQ+ will continue to be at the forefront when it comes to supporting entrepreneurs by mobilizing sectors, stimulating research and development, supporting emerging solutions, and creating financing programs and opportunities. I'm convinced that the coming year will be successful and abound in creativity and joyful moments we can all share. We look forward to working with you!



Annie-Kim Gilbert, Ph. D.
Chief Executive Officer

MEDTEQ+

MEDTEQ+, Taking Healthcare Technologies to the Next Level

Who is MEDTEQ+?

The MEDTEQ+ industrial consortium for research and innovation in healthcare technologies has been supporting Quebec and Canadian innovators for over a decade. As a key player in positioning healthcare technologies both here and around the world, its objective has always been to improve tomorrow's healthcare by helping guide local entrepreneurs through the innovation cycle from concept to commercialization, with a view to benefiting humanity.

In more than 10 years, MEDTEQ+ has coordinated over 40 calls for projects and supported over 200 innovative projects thanks to the financial backing of the provincial

and federal governments, totaling over \$145 million, as well as through various subsidy programs, all of which have made it possible to implement over 450 innovations. Over 200 industrial and institutional partners have been involved in these projects, which has enabled MEDTEQ+'s industry members to accelerate their technological progress. In addition, MEDTEQ+ has encouraged a sizable transfer of knowledge. Through its funding programs, MEDTEQ+ has trained more than 775 students and supported projects that have led to over 500 publications, contributing to the creation and maintenance of over 1800 jobs in the medical technology sector.



¹ Collaborative projects supported by MEDTEQ+ have resulted or will result in more than 500 publications
² Last tabulated on March 31, 2022

Tribute to Diane Côté

A great lady of innovation bids farewell



After more than 12 years at the helm of the MEDTEQ+ Consortium, Diane Côté announced her retirement as CEO in August 2023. Mrs Côté is recognized for her exceptional dedication, rigour, vision and ability to mobilize stakeholders. Under her guidance, MEDTEQ+ has become a true flagship, positioning the leadership of local healthcare technology innovators both nationally and internationally. At the General Member Assembly in June 2023, Mrs Côté, who had been one of the driving forces behind MEDTEQ+, passed the torch to Annie-Kim Gilbert with a sense of accomplishment, but above all else with a sense of transformation that would shape future thinking.



At the end of the day, over a hundred partners and collaborators from the life science ecosystem paid tribute to Ms. Côté's exceptional career. It was an evening full of emotion and testimonials.

In November 2023, Mrs Côté was also honoured by her peers as the first woman to be awarded the Prix Bernard-Landry at the Gala held by the Association pour le développement de la recherche et de l'innovation du Québec. This award is presented to a high-profile individual who has made a significant contribution to the development, growth, achievements and performance of Quebec's research and innovation ecosystem.



2023-2024: An Impetus for Renewal


In 2023-2024, MEDTEQ+ has embarked on a new chapter, which began with a strategic review to pursue and accentuate its impact on the life science ecosystem. This period of introspection enabled the organization to better define the issues at stake, build up its foundations and embark on a new era with renewed dynamism, just as powerful as that of previous years.

Last year's figures testify to MEDTEQ+'s undeniable contribution to the industry. However, given the rapidly changing economic and social context in the healthcare technology sector, it became imperative for the consortium to take time out to survey the ecosystem. At the start of 2024, MEDTEQ+, in association with a firm and an outside consultant, embarked on a major strategic review, calling on a large number of stakeholders to determine its members'

needs, pursue ongoing work, and focus its activities on specific elements of the value chain.

More than one hundred external public and private partners were consulted, making this planning exercise a true collaboration between these two sectors. Several major players in the innovation ecosystem, including other RSRI's, were also involved. It also testifies to the special relationship MEDTEQ+ has built up with its partners over the years. Finally, the Board of Directors, at a retreat on March 18, 2024, confirmed the new directions that will guide the organization's actions to attain their set objectives. Substantive discussions helped define and more concretely identify the added value of these directions aimed at supporting healthcare technology development.

Five Distinctive Advantages and Qualities of MEDTEQ+




An experienced, multidisciplinary team recognized by partners and members for its rigour.



A solid understanding of different networks and political agencies, enhanced by the ability to work collaboratively to carry out its mandates.



A vast network and a solid foothold in the ecosystem to identify and create high-impact links.



Concrete impacts to reduce the "valley of death" in the medical technology sector.



Strong credibility in the ecosystem owing to its team, its members, the impact of its projects, its innovative programs and its pan-Canadian reach.

i It is also thanks to this reflective approach that MEDTEQ+ has officially launched its strategic planning process for the 2024–2027.

2024–2027 Strategic Plan

Through exhaustive consultations, including an inspiration wall, interviews with over a hundred stakeholders, and a strategic retreat, MEDTEQ+ conducted an in-depth review

of its positioning within the pan-Canadian life science ecosystem. This rigorous exercise has enabled us to identify five strategic priorities for the coming years.

- 1 Enhancing our service offering
- 2 Optimizing operational efficiency and governance
- 3 Consolidating our financial structure
- 4 Strengthening our strategic alliances
- 5 Promoting expertise and created value



 To which we also add **three commitments to current issues** for the organization to integrate into its actions.

1 Inclusive Health

MEDTEQ+ is committed to promoting equitable access to innovative medical technologies between different regions and population groups, and to supporting the creation and deployment of medical devices adapted to the specific needs of people with special needs.

2 Environmental Responsibility

MEDTEQ+ is committed to supporting the actions of the organization's sustainable health committee with regard to internal awareness campaigns aimed at environmentally responsible actions such as car pooling; responsible consumption; recycling initiatives; and favouring the purchase of ecological and/or local products while taking into account their life cycle and environmental impact.

3 Interoperability

MEDTEQ+ is committed to raising its members' awareness of the development of technological solutions that promote interoperability, as well as to take this into account when evaluating projects.

MEDTEQ+'s mission, vision and values were also reviewed to better match the resulting strategic ambition and desired positioning within the pan-Canadian life science ecosystem.

Mission

Energized by collaboration, MEDTEQ+ helps health technology companies bring their innovations to market, accelerates economic growth, and improves public health.

Vision

Thanks to its unique expertise, the strength of its network and its distinctive healthcare technology service offer, MEDTEQ+ is a world-class Canadian benchmark.

Values



Audacity

Audacity is the driving force behind innovation at MEDTEQ+. By daring to think differently and pushing existing boundaries, we explore new ideas and turning challenges into opportunities. Our aim is to be at the forefront of research and development to improve patients' lives.



Collaboration

MEDTEQ+ brings researchers, companies and clinicians together to create an innovation ecosystem where tomorrow's medical technologies come to life. This collaboration accelerates the development of innovative solutions that meet patients' needs and improve health for all.



Agility

MEDTEQ+ fosters a culture of agility to navigate a constantly changing environment. By adapting quickly to change and seizing emerging opportunities, we support the development of innovative solutions that meet the needs of the healthcare sector.



Excellence

At MEDTEQ+, we are driven by excellence, integrity, and the desire to innovate. We are committed to promoting ethical practices and establishing strong partnerships to advance the medical technology sector.



Creation of Value

MEDTEQ+'s mission is to revolutionize healthcare through technological innovation. We aim to improve the lives of patients, contribute to healthcare efficiency and stimulate economic growth by promoting the development and commercialization of innovative technologies.

Highlights of the Past Year

Unique coaching expertise

Over the past year, more than **200 jobs** were created at MEDTEQ+ member companies, and more than **50 solutions**, processes, and practices were implemented in over **160 innovation projects** funded in the field.

This year alone, MEDTEQ+ has contributed to:



+ 160

innovative projects underway in our portfolio



+ 140

publications



+ 20

active strategic partners: Local, pan-Canadian and international



5

calls for projects launched

MEDTEQ+ continued its commitment to supporting collaborative projects between the public and private sectors. This year alone, nearly **190 teams**, comprising industrial firms and researchers, were assisted in setting up potential

collaborative projects, while more than 100 teams were supported in carrying them out, with a total value of approximately **\$92 million**. Private-sector support for these projects totals **more than \$53 million**.



In Quebec

Once again this year, MEDTEQ+ has supported numerous collaborative projects in Quebec through various support programs and in association with a range of partners. MEDTEQ+ continues to encourage partnerships between the academic, institutional, and industrial spheres, as well as to strengthen the technological innovation capacity of companies and stakeholders.

Vitrine d'innovations en santé



As part of the Vitrine d'innovations en santé program, which aims to increase the proportion of Quebec-produced goods in the supply chains of Quebec's health and social

service network, two program calls were launched during the previous fiscal year. The two themes, seniors' homes and alternative residences (MDA-MA), and then homecare support (SAD), had been identified by the Bureau de l'innovation of the Ministère de la Santé et des Services sociaux as two priority sectors within Quebec healthcare.

Following these calls, a total of **nine projects have been confirmed for funding, and eight are currently in the field.** They are all being monitored by the MEDTEQ+ team. These projects have a combined **worth of over \$3 million**, and all the SMEs involved are from Quebec. MEDTEQ+ thus continues to actively support Quebec companies wishing to introduce innovative, market-ready technologies that can meet the needs identified by the health and social service network. Thanks to its efficient management of the program, MEDTEQ+ contributes to improving the resilience of supply chains in the healthcare and social service network by involving innovative Quebec companies, thereby generating significant socio-economic gains for the province.



Deployment of the Réseau d'évaluation et d'innovation en santé (RÉIS)



Réseau d'évaluation et de l'innovation en santé

Over the past year, the Réseau d'évaluation et d'innovation en santé (RÉIS) has solidified its structure and consolidated its mission in association with teams from the six RÉIS sites:

- Centre hospitalier de l'Université de Montréal
- CIUSSS de l'Estrie-CHUS
- CIUSSS de la Capitale-Nationale
- CIUSSS du Nord-de-l'Île-de-Montréal
- CIUSSS du Centre-Sud-de-l'Île-de-Montréal
- CIUSSS du Centre-Ouest-de-l'Île-de-Montréal

The first RÉIS mandate, covering the period 2021–2024, was aimed at funding the creation or consolidation of expert teams within participating establishments dedicated to supporting and collaborating with companies, with

MEDTEQ+'s role focused on managing the grant. After just 18 months, the results of this mandate are very encouraging, with participating establishments reporting, among other things, **more than 15 jobs created, an average of 20 partnership requests received per establishment annually**, and more than **25 companies** that are carrying out (or have carried out) a collaborative project with a RÉIS site. Following the success of this first mandate, MEDTEQ+ was given a new mandate to ensure the continuity of grants to establishments until 2026, with additional funding of **\$3.5 million (the first mandate was supported by nearly \$4.5 million in joint funding from the MEIE and MSSS).**

In 2023, in addition to its role of managing calls for proposals and grants, MEDTEQ+ was also given a mandate to coordinate RÉIS, starting with the development of strategic planning, including a first action plan (September 2023 to September 2024). This was followed by a major collaborative effort involving 35 stakeholders, including 18 representatives of healthcare technology companies and the six RÉIS member institutions.

The mission of RÉIS is to connect and ensure collaboration among health technology companies and the health and social service establishments in its network. This is done with a view to accelerating the development and evaluation of innovations that meet the needs of the public and support their implementation in Quebec and elsewhere.





The Strategic Objectives of RÉIS are:

1

Facilitate access to expertise and a community or clientele representative of the company’s target market within health and social service establishments. The aim is to enable companies to better understand the needs and environment of their innovations, and thus identify areas for collaboration in response to real healthcare needs.

2

Develop and optimize collaboration among companies and health and social service establishments in Quebec at all stages of innovation development and evaluation.

3

Identify, develop, and share best practices in health technology development and assessment that promote and prepare for the adoption of innovations locally, nationally and internationally, for the purpose of facilitating market access for health technologies developed by companies.

In the first year of its coordination mandate, MEDTEQ+ set up and led the first RÉIS governance meetings, in close association with the MEIE and the Bureau de l’innovation of the MSSS. This governance comprises several committees, with representatives from more than **20 public and private organizations** mobilized around the RÉIS mission:

- **The Governance Committee, which oversees the initiative direction and strategy deployment.**

- **The Main Advisory Committee, which identifies and prioritizes the issues to be addressed.**
- **Various expert committees (or work tables), which develop deliverables in response to the prioritized challenges.**

The [RÉIS webpage](#) went online in June 2024, providing a window into collaboration with member establishments.

Across Canada

Acceleration and Innovation Program

Through the additional financial leverage provided by the Acceleration and Innovation Program financed by NRC–IRAP, MEDTEQ+ was also able to support 15 companies in developing their commercialization strategy this year. All respondents to the survey of participating companies stated that this program stands out favourably from other similar support programs (Incubation/Accelerate) and would recommend it to other entrepreneurs.

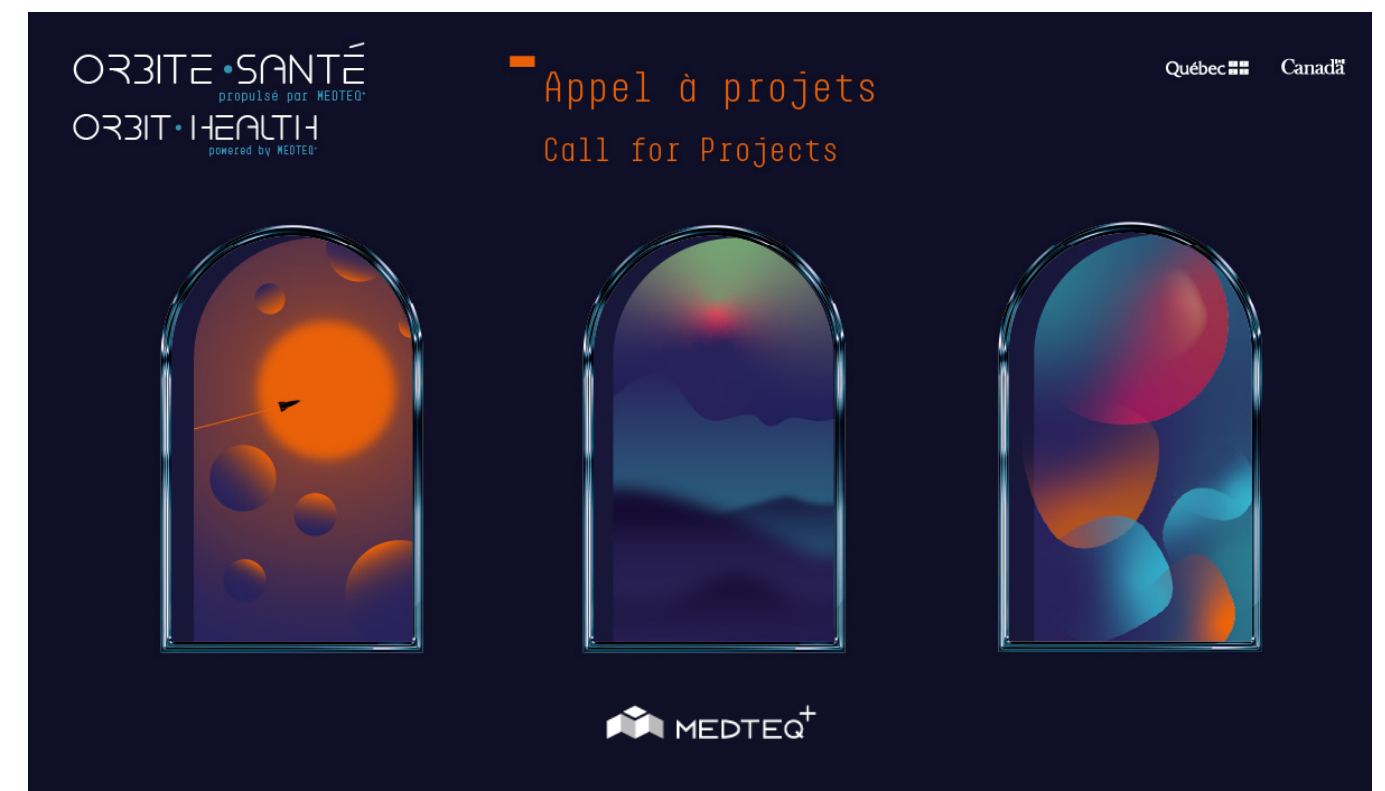
Launch of Orbit Health in Association With the Canadian Space Agency

In the coming decades, the aerospace world will be marked by new missions beyond low-Earth orbit, to the moon or Mars, for example. These expeditions create extreme space living conditions for astronauts, who find themselves at great distances from Earth with limited medical access. This reality is also present on Earth, where many engineers, researchers and entrepreneurs are helping to develop innovations for

the planet’s rural, remote or northern communities, where access to medical resources is difficult.

Orbit Health, an initiative powered by MEDTEQ+, is a special call for projects designed to support Canadian companies in developing technologies that will meet telemedicine and autonomous healthcare needs. Specifically, this call is part of MEDTEQ+’s IMPACT program and will be conducted with the financial support of the Canadian Space Agency (CSA). **A total of \$1.8 million has been allocated to MEDTEQ+ for this call.**

The call was launched on January 24, 2024, and was immediately a huge success with MEDTEQ+’s member network and the life science ecosystem. In all, **33 projects** were received through the call. This enthusiasm for the subject surpassed MEDTEQ+’s expectations and speaks to the Canadian innovation ecosystem’s keen interest in developing technologies for healthcare delivery in remote areas, as well as MEDTEQ+’s ability to mobilize its network quickly and effectively.



envisAGE

2023–2024 marks the official roll-out of the envisAGE program, supported by Stream 5 of the Government of Canada's Strategic Innovation Fund. Directed by MEDTEQ+ in association with AGE-WELL, the launch took place on January 26, 2023, in Montreal. Since then, the program structure and governance have been implemented, leading to the launch of the first call for innovative projects at the envisAGE Annual Forum held in October 2023 in Toronto. The enthusiasm with which envisAGE was received can in part be attributed to MEDTEQ+'s extensive mobilization of the AgeTech ecosystem, which organized several events and webinars to inform and encourage collaboration. As part of the envisAGE initiative, about ten Beachheads™ will support project development, and five Innovation Hubs will be called on for their expertise. Over the past year, MEDTEQ+ has established key partnerships to extend collaboration activities. Access to partners and the establishment of strong collaborative relationships with them are a key element of envisAGE's value proposition for SMEs to ensure evaluation projects are completed and technology successfully integrated into the market. The Quebec government also confirmed its support for envisAGE with the announcement of **\$4.5 million in funding** from the Ministère de l'Économie, de l'Innovation et de l'Énergie to financially support projects taking place in Quebec. The selected projects will be officially announced at the next envisAGE Forum in autumn



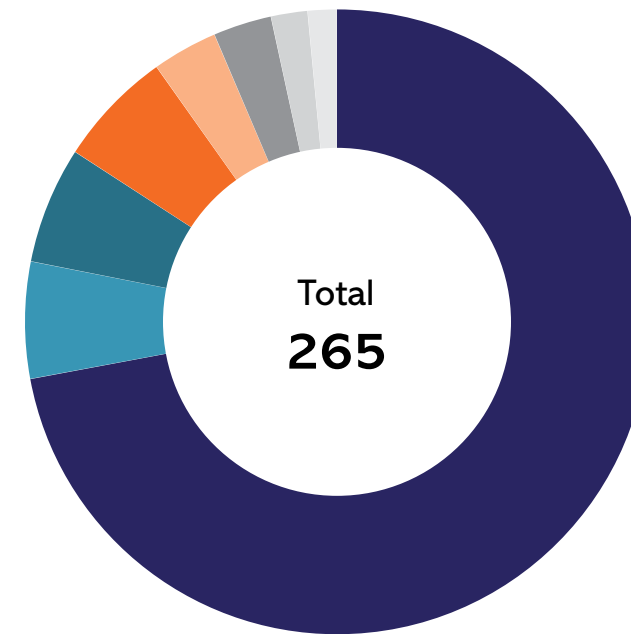
2024 and will enable participating SMEs to access sources of financing to bring their technologies to market, thereby solidifying Canada's role as a leader in the AgeTech sector. Each collaborative project is developed in partnership with a community laboratory, which may be a living environment, an organization providing care or services to seniors, or a community organization. Social innovation is thus at the heart of this program.



Mobilization Reaches New Heights

Over the past few years, MEDTEQ+ has strengthened its role as a catalyst for the ecosystem in Quebec's healthcare technology development sector. Always keen to improve its service offer to its members, the organization has developed and provided a wide range of specialized tools and services

to meet the needs of its network, which now boasts **265 members, an increase of 11% over last year**. Among other things, members underscored MEDTEQ+'s ability to make connections, extend its influence, and demonstrate its comprehension of the health and social service network.



Breakdown of Consortium Members on March 31, 2024

- SMEs: 191
- Large companies: 16
- Partners/associates: 16
- Health and social service networks: 16
- Academic institutions: 9
- Universities: 8
- CCTTs: 5
- Research centres: 4



Strategic Positioning

Over the past year, the strategic review has identified the need for MEDTEQ+ to revisit and improve its positioning in the ecosystem. Against this backdrop, three major projects got underway in 2023, namely the drafting of the 2024-2027 Communication Plan, the modernization of the corporate image, and the redesign of the MEDTEQ+ website, our main showcase. These three major projects are scheduled to be unveiled during the next fiscal year.

Despite the workload required to carry out these important mandates, our communication activities continued to generate excellent returns for the organization.

Social Media

Active on two major social media platforms, MEDTEQ+ has an engaged LinkedIn community of over **6469 subscribers, compared with 5965 last year**. Over the same period, MEDTEQ+ created over 169,885 organic impressions with an average engagement rate of **9.023%**³.

The medteq.ca website

Over the past year, more than 23,000 unique users have browsed the MEDTEQ+ website. With an average engagement rate of 54.5%, visitors come mainly from Canada, but

also from the United States, Europe, and North Africa, a sign of MEDTEQ+'s international appeal and recognition. As an essential gateway for the pursuit of MEDTEQ+ activities, the consortium has also been working hard on plans to redesign the site to better meet the needs of companies and researchers. This new showcase is set to be deployed in the coming fiscal year and will enable us to better consolidate all communication initiatives, as well as better present the projects supported.

Newsletter

MEDTEQ+ sends out a monthly newsletter to **more than 3000 subscribers** with an average open rate of over **40%**, well above the best content marketing campaigns on the market.

Events

Every year, MEDTEQ+ organizes events that enable its community to network with the entire life science ecosystem and create links that accentuate its role as facilitator. This year, MEDTEQ+ **organized 10 events and participated in over 80 networking events**.

The MEDTEQ+ Innovation Summit remains the organization's flagship event. With over 500 participants, 250 organizations and 30 sponsors, the 2024 edition was a great success, with an 83% participant satisfaction rate. The organization relied on the expertise of 43 national and international experts to flesh out its various panels, including several from Quebec, helping to highlight provincial healthcare technology expertise. Attendee engagement was remarkable, with MEDTEQ+ counting about 1166 visits to the virtual booths and almost a hundred appointments

with the RSRI team. In addition, the MEDTEQ+ Innovation Summit website alone generated over 40,000 views, with about 5100 single users.

This high level of participation between the private sector (SMEs, major corporations) and the public sector (healthcare network, universities, research centres) makes the MEDTEQ+ Innovation Summit an essential networking event for Quebec companies looking to develop relationships and establish new partnerships.

News Review

The MEDTEQ+ news coverage report for the past year includes over 2850 mentions in social media, blogs, and the press, but excluding LinkedIn.

This represents a daily average of 7 mentions.



³ For LinkedIn, an engagement rate above 5 is considered excellent. Source: Google Analytics: This engagement rate refers to the percentage of sessions engaged with on one's website or mobile application.

Conclusion of our CECR Mandate

The past year marked the attainment of an important milestone for MEDTEQ+, namely the conclusion of the CECR mandate obtained in 2017. The CECR mandate enabled

MEDTEQ+ to benefit from **\$19.5 million in federal financing** toward the creation of the Beachhead™ network and MEDTEQ+ Invest Fund.

A Unique Stakeholder Validation and Collaboration Model

The Beachhead™ Network

Thanks to its in-depth knowledge of the academic and clinical worlds, MEDTEQ+ has created the Beachhead™ network. Comprising 11 Canadian clinical sites and 3 inter-

national sites, this network aims to validate and evaluate the innovations of Canadian SMEs under actual care conditions. The network paves the way for the adoption of innovations in the public and private healthcare markets. Here is a table of the members of the Beachhead™ network:

Beachhead™	Speciality	Location
Centre hospitalier de l'Université de Montréal	Artificial intelligence	Montreal, Quebec
Research Institute of the McGill University Health Centre	Surgical innovation	Montreal, Quebec
McGill University and Douglas Research Centre	Neuroscience and mental health	Montreal, Quebec
CHU de Québec - Université Laval	Precision medicine	Quebec City, Quebec
Alberta Health Services	Stroke and neuroinformatics	Edmonton, Alberta
The Ottawa Hospital and The Ottawa Hospital Research Institute	Digital health	Ottawa, Ontario
Vancouver Coastal Health Authority	Emergency medicine and artificial intelligence	Vancouver, British Columbia
CIUSSS du Nord-de-l'Île-de-Montréal	Connected health, intelligent home care, chronic diseases	Montreal, Quebec
CHU Ste-Justine	Pediatric health	Montreal, Quebec
CIUSSS de l'Est-de-l'Île-de-Montréal	Aging and mental health	Montreal, Quebec
University Health Network and Princess Margaret Cancer Centre	Oncology	Toronto, Ontario
Medical Valley EMN	European market access for digital health	Bavaria, Germany
Strasbourg University Hospital Institute	Image-guided surgery	Strasbourg, France
Sheba Medical Center	Artificial intelligence	Ramat Gan, Israel

Despite the limited resources allocated to the 11 Canadian centres, the Beachhead™ centres have been a resounding success in terms of corporate collaboration. **Over 230 companies have been supported, and more than 40 projects, worth over \$15 million**, have been directed toward the centres, which involved some forty Canadian companies. The Beachhead™ program **has enabled four of these centres to acquire five technologies**. One of the objectives of the CECR program was to make the Beachhead™ network autonomous and sustainable. Despite the current difficult economy, particularly in the healthcare sector, MEDTEQ+ has succeeded in guiding the network towards this autonomy. Over 150 companies were guided through the network

without direct MEDTEQ+ intervention. Today, **some thirty positions specifically dedicated to the program are maintained by the centres** demonstrating the tangible benefits of innovation.

The Beachhead™ network provides prioritized access to renowned clinicians and a critical mass of patients, as well as a recognized cost-effective clinical evaluation method. This combination has enhanced the Beachhead™ network and enabled MEDTEQ+ to forge strategic partnerships with industry leaders such as Boehringer Ingelheim and Novartis, as well as major foundations such as Brain Canada. These collaborations have produced innovative, useful solutions for the healthcare sector.

Concrete Examples:

CONNECT-ILD (2021–2024)

The CONNECT-ILD project (2021–2024), born of a call for solutions launched and managed by MEDTEQ+ in collaboration with Boehringer Ingelheim. This project, co-funded with the Ontario Centre of innovation (OCI) and worth over \$465 thousand, has enabled the recruitment of patients at the Firestone Hospital Centre (Ontario), a necessary step for obtaining the evidence needed to improve early diagnosis of idiopathic pulmonary fibrosis, a rare disease. The digital solution used was developed by Ontario-based Seamless®, part of the MEDTEQ+ Invest portfolio. This collaboration represents a major boost for Seamless® as it continues to grow, giving it access to new global markets.

22-A ADHD Child Routine Phase 2

Project 22-A ADHD Child Routine Phase 2, a Beachhead™ project co-funded by the Brain Canada Foundation and MEDTEQ+ in March 2024. This project, worth a total of over \$814 thousand, is taking place at CHU Sainte-Justine (Beachhead™ Avenir) and CIUSSS du Nord-de-l'Île-de-Montréal (Beachhead™ NIM Intelliance). Its purpose is to clinically validate and evaluate the NeuroSolutions Group's solution. The project is producing evidence to demonstrate the usefulness of this solution in reducing waiting lists for young ADHD patients and improving their care trajectory on account of the data shared by NeuroSolutions. These data will enable the company to build a case study with Quebec's Ministère de la Santé et des Services sociaux (MSSS) for potential province-wide integration and deployment.

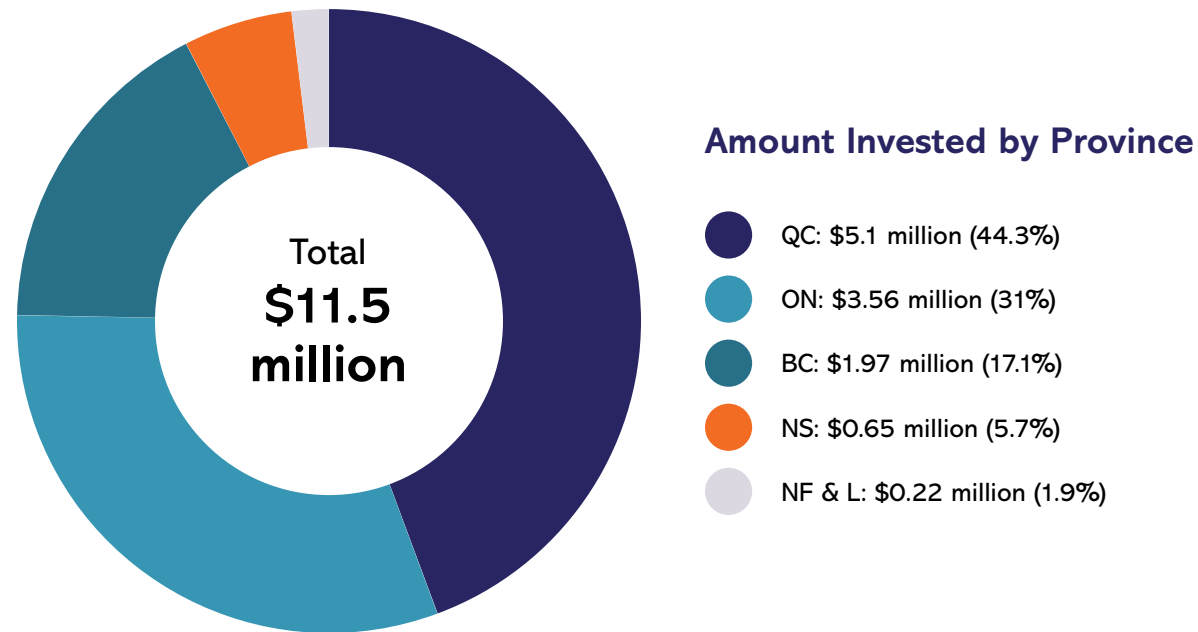


The Beachhead™ concept has also inspired other initiatives, such as RÉIS in Quebec and the envisAGE Beachheads™, a pan-Canadian network of healthcare facilities dedicated to the clinical-economic evaluation of innovative AgeTech solutions.

MEDTEQ+ Invest: Contributing to the Financing of Supported and De-risked Companies

Among the major achievements of the CECR mandate, the creation of the MEDTEQ+ Invest Fund has played a key role in supporting and accelerating the growth of 24 Canadian companies in several provinces, as illustrated in the chart below. The MEDTEQ+ Invest Fund focuses on seed and early-stage financing for the development of medical software, hardware and technologies. MEDTEQ+ Invest fills the gap in venture capital financing for pre-start-up and

start-up medical technologies with an approach that de-risks companies by getting them to collaborate with key players in its ecosystem (international medtech companies, various experts), while delivering tailored support via structured projects in its trained clinical networks, all of which can be accelerated by non-dilutive funding, with the sole aim of supporting the company's commercial plan.

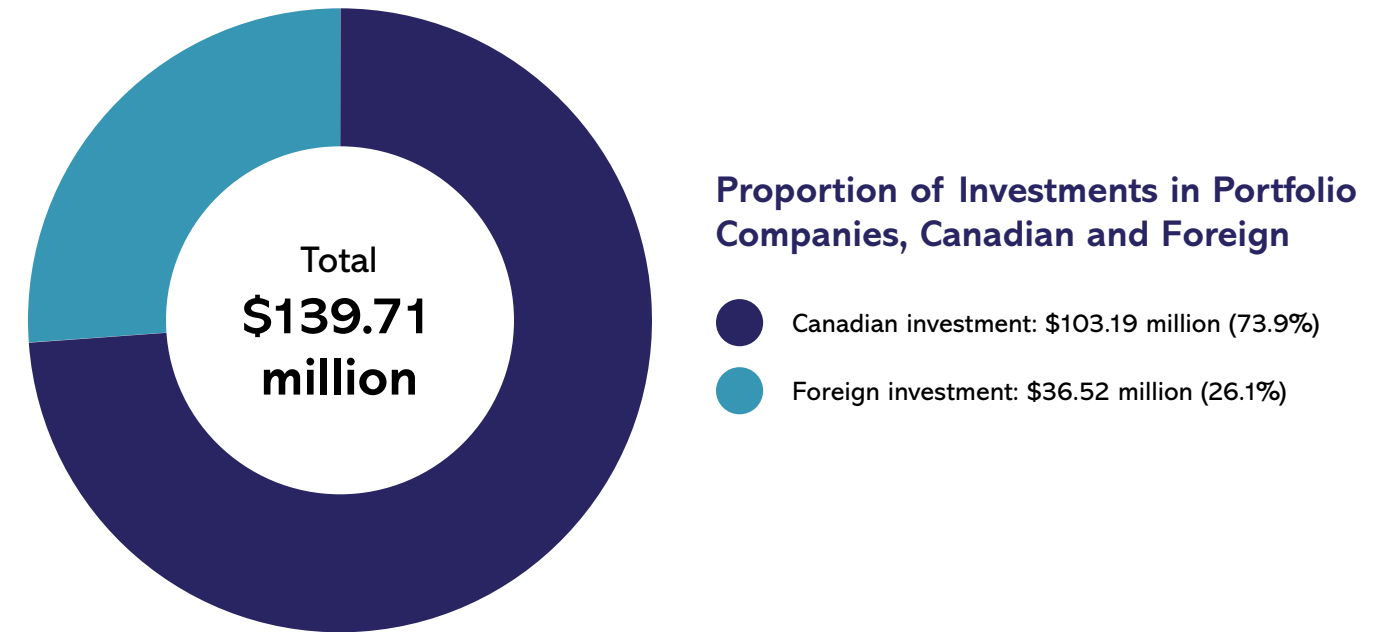


With an excellent reputation for supporting start-ups and SMEs, particularly through the financing of collaborative projects, MEDTEQ+ has developed unique expertise within the healthcare ecosystem. This reputation has attracted over \$128 million in investment from some 300 co-investors, including 114 institutional investors such as BDC, Baxter, Intuitive, iGan Partners, Desjardins, Sandpiper, IQ, Nimbus, GE Healthcare, and RBC. The total value of the investment rounds in which MEDTEQ+ participated came to nearly \$140 million, representing a significant leverage of 11.12 for MEDTEQ+ investments.

Recognized since 2020 as a leading Canadian public investor, MEDTEQ+ was ranked by PwC MoneyTree and White Star Capital as one of the five most active early-stage investors that year.

Internationally, MEDTEQ+ has built up a solid reputation thanks to various partnerships with foreign organizations, its three Beachhead™ sites located in France, Germany, and Israel, as well as its investment fund. This fund has helped attract over \$36 million in foreign investments in the financing rounds in which MEDTEQ+ has participated,

representing over 25% of total investments. This proportion of foreign investments is noteworthy, especially since venture capitalists often have a marked preference for the US market. This significant contribution from foreign investors illustrates the effectiveness of MEDTEQ+ in attracting international capital to Canada's healthcare technology sector.



Collaboration is at the Heart of the MEDTEQ+ Approach

MEDTEQ+ believes that collaboration and joining forces are key to successfully developing healthcare technologies. This is why the creation of strategic partnerships is at the heart of our approach. For example, over the past year, MEDTEQ+ has established a strategic partnership with the Brain Canada Foundation. With a budget of \$2 million, this partnership provides projects with up to 50% of the funding they need, giving companies attractive financial leverage to validate their solutions in real-life care environments and prepare them for the market. This funding can be combined with other provincial programs (MEDTEQ+ in Quebec, OCI in Ontario, Alberta Innovate in Alberta).

In 2022–2023 alone, MEDTEQ+ confirmed it signed six partnership agreements. These agreements all serve to in-

crease the Consortium's support for its members in their key activities: stimulating technological innovation and clinical validation to prepare for commercialization via partnerships with academic and clinical research centres, boosting collaborations in specific sectors (frontline healthcare), expanding sources of funding for our members, etc.:

- Frontline health care
- Carleton University / SAM3 Innovation Hub
- University of Northern British Columbia / CTAAN Innovation Hub
- Ontario Bioscience Innovation Organization (OBIO)
- iGan Partners

These are added to MEDTEQ+'s list of active partnerships for 2023–2024 with the following organizations:

- AGE-WELL
- Axelys
- Boehringer Ingelheim
- Novartis
- Strasbourg IHU
- TransMedTech Institute
- IVADO

- The MUHC Foundation
- The MGH Foundation
- Fonds de recherche du Québec – Santé (FRQS)
- Theodorus IV Investment Fund
- Medical Valley
- Medicen and Laser-GO Global
- MITACS
- PME MTL
- Royal Institution for the Advancement of Learning / McGill University

Additions and Changes to the Governance Structure

The 2023-2024 fiscal year marks the creation and transformation of a number of committees at MEDTEQ+ to better support its mission and operations.

Setting up the Governance Committee

Firstly, MEDTEQ+ formalized the establishment of the governance committee confirmed at the General Assembly of MEDTEQ+ members in June 2023. The Committee's mandate is to ensure the proper functioning of the Board of Directors in terms of composition, structure, policies, and practices. The Committee is permanent and reports to the Board of Directors, to which it has the power to make recommendations. It is also framed by an Action Plan that addresses several elements essential to the smooth running of the Board and MEDTEQ+: The directors' code of conduct, the charter delegating powers to the CEO and his/her team, and the evaluation of the CEO. The Governance Committee also oversees MEDTEQ+'s compliance with Bill 25.

Steering and Monitoring Committee

MEDTEQ+ has also created a Steering and Monitoring Committee (SMC) to oversee the strategic planning process, a major undertaking for the organization this year. It ensures that strategic planning is aligned with the organization's needs and is efficiently executed.

Beachhead™ Committee

At the end of the fiscal year, MEDTEQ+ dissolved the Beachhead™ Committee, as the program was coming to an end.

MEDTEQ+ has transformed this committee into a working group to draw on the knowledge of the industry partners sitting on it, for the purpose of improving MEDTEQ+'s support for the Beachhead™ network. The aim of this working group is to support MEDTEQ+ as it develops its coaching expertise and propose approaches to consolidating network sustainability.

envisAGE

Setting up and launching the envisAGE initiative also required a governance structure to be developed. The governance of envisAGE, which has over 50 members, comprises the following committees:

- Management Committee
- Project Selection Committee
- Finance and Risk Sub-Committee
- Two advisory committees:
 - Senior and Caregiver Advisory Committee led by AGE-WELL
 - Ecosystem Advisory Committee

Outsourcing contract

The collaboration agreement was renewed with Innovitech following a public call for tenders.

Financial Statements

Total Revenue	\$14,216,744
Provincial subsidies	\$5,364,585
Federal subsidies	\$5,499,182
Management revenue	\$721,418
Membership revenue	\$254,033
Other revenue	\$2,377,526

Total Expenditures	\$7,777,336
Human capital and related expenses	\$5,634,439
Other program expenses	\$1,239,790
Other operating expenses	\$903,107

Expenses Related to Grants Awarded	\$5,601,254
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Success Story

The MEDTEQ+ Impact: Successful Collaborative Projects

11-D TakeMeHome

Project Summary

Up to 40% of patients hospitalized for major cardiovascular events (myocardial infarction, heart failure, cardiac surgery) are diabetics. Following this episode of care, new cardiovascular treatment and prevention goals are generally set for the patient in line with Canadian cardiology and diabetes guidelines. Unfortunately, these objectives are rarely achieved, due to a lack of strong support and suitable information, as well as too few patients being encouraged to take charge of their own health. Given the limited human resources available, the current challenge is to provide support to an ever-increasing number of patients. Our hypothesis is that the use of a telehealth platform that:

- closely monitors a patient's cardiovascular condition;
- empowers the patient to manage their own disease; and
- monitors the patient's progress along a pre-established care plan (in order to slow or even halt the progression of the disease in the middle and long term); would reduce overall patient morbidity and mortality more rapidly and effectively without further consuming healthcare resources.

The aim of this project is therefore to develop an intelligent, adaptive mobile application which, once the patient has been progressively transferred from the hospital to the frontline, will:

- guarantee high-quality remote monitoring of and training for this patient;
- propose care objectives and an optimized treatment plan for achieving them that would align with national and international guidelines.

Benefits

- 14 publications and presentations at events
- ADRIQ MEDTEQ+ Award
- The project has enabled us to improve Takecare remote monitoring technology (Greybox) and develop a drug suggestion algorithm (digital therapy). CHUM's standards and practices have been fine-tuned as a result of this experience journal articles being prepared
- 5 students involved in the project
- 4 jobs created at CHUM (2 research nurses and 2 research officers) Each employee has benefited from specialized research and development training
- 4 jobs created at BI
- 3 Greybox: 6 jobs maintained and 2 new hires



Partners

- Greybox Solutions
- Boehringer Ingelheim
- Centre hospitalier de l'Université de Montréal (CHUM / CRCHUM)

Success Story

13-E AI Dental Volumetry

Project Summary

Dental offices must handle hundreds of thousands of dental reconstructions annually. Each dental reconstruction generally requires the intervention of a dental professional to design and manually capture the characteristics of the tooth to be reconstructed. As a result, this time-consuming process is difficult to reproduce between professionals, thus resulting in significant quality variations. This project will use deep learning approaches to develop a new methodology for automatically designing custom teeth for each patient. To achieve this goal, we are working with industry partners who will provide us with around five thousand digitized dental impressions of upper and lower dental arches (mandible and maxilla). Using these healthy arches as a gold standard, we plan to train neural networks to generate and/or deform mesh patterns in order to obtain a volumetric surface representing the tooth to be reconstructed in its spatial context. The resulting integrated system will be designed for continuous learning. In fact, the teeth generated by the

system can be modified by a dental professional performing a restoration. The resulting modification will then be used to re-train the network and increase its efficiency.

Benefits

- 4 papers presented and published at the proceedings of prestigious international conferences
- 2 presentations at local events organized by IVADO
- 3 newspaper articles in preparation
- 1 patent application filed
- The project has created several models by using AI to develop 3D imaging with a view to creating crowns customized to patients' dental arches. The extremely encouraging results of this research project have been integrated into an online application developed in collaboration with ORS.
- 10 students involved
- 3 jobs maintained at the research institute
- 3 jobs maintained at Intellident Dentaire



Partners

- Imd Research
- Intellident Dentaire
- Polytechnique Montréal

Success Story

12-O Immunoplasmonics

Project Summary

Lung cancer is the leading cause of death worldwide, with 1.6 million deaths attributed to it every year. Despite improved overall survival with chemotherapy, prognosis remains poor and treatment options limited for patients with advanced non-small cell lung cancer (NSCLC). Recently, a new treatment method has been introduced for cancer: Immunotherapy, a therapy that interacts with the immune system to enable it to treat the cancer. However, there is still no rapid, specific non-invasive procedure for identifying candidates for immunotherapy and other targeted therapies. The procedure we propose involves the use of specific cell surface proteins that can be detected using antibodies bound to metal nanoparticles. Multiple metal nanoparticles with different optical properties are easily produced to selectively target cell type-specific epitopes with a single preparation. Detecting these markers is straightforward, requiring neither expensive equipment nor complex algorithms. This project can be considered trailblazing, since clinical validation on human cytology samples will ensure highly beneficial diagnostic accuracy and the optimal selection of immunological treatment, thereby improving the health of Canadian patients. To carry out this innovative research project, we have gathered an excellent multidisciplinary and complementary team of internationally renowned scientists and industry partners from every applicable field of knowledge. This team has already acquired considerable expertise in metal

nanoparticles and immunoplasmonic detection for a variety of biomedical diagnostics. Our excellence is demonstrated by numerous publications, patents, and invention declarations. Our industrial partners Photon Etc. and ORS Inc., as well as our collaborator TRIBVN Healthcare, round out our skills in technology transference and the commercialization of new medical diagnostic tools.

Benefits

- 8 publications
- 7 publications underway
- 9 students involved
- The project has led to the creation of a spin-off company, Vega Bioimaging, founded by members of the research team, including Michel Meunier, the project's lead researcher.
- Research contributions:
 - Development of multiple plasmonic nanoparticles as immunological probes.
 - Development of quantification and multiplexing protocols for plasmonic immunolabeling.
 - Accounting for plasmonic imaging with standard transmission microscopy.
 - Confirmation of immunoplasmonic performance by comparison with standard techniques.
 - Development of digital methods and AI-based image analysis.
 - Creation of new standards for patient treatment eligibility.

Partners



- Photon Et
- Dragonly (formerly Object Research System)
- Oncopole
- Polytechnique Montréal

Success Story

13-D Flash Dosimetry

Project Summary

Radiological cancer treatments promise a targeted approach that treats tumours while avoiding the irradiation of healthy tissue. Such treatment requires meticulous radiation dose calibration with excellent spatial resolution using a measuring device (dosimeter) that ideally mimics human tissue (i.e. water) and does not affect the radiation path. By exploiting hydrated electron dosimetry, we propose to create a highly sensitive and rapid dosimeter that uses water as the detection medium. Hydrated electron dosimetry involves measuring the radiation dose absorbed in water by monitoring the concentration of hydrated electrons (short-lived radicals produced by the water radiolysis) with absorption spectrophotometry. In this phase of the study, we will assess the suitability of the technique for the very low dose pulse regime for both conventional and FLASH radiotherapy. The radiation hardness of all the materials involved will be studied in detail. In addition, software for calculating the chemical radiation yield for hydrated electrons, namely the number of chemical entities produced by

ionizing radiation, and software for the automatic acquisition, analysis, and reporting of the absorbed dose will be developed. Future work will focus on miniaturizing this technology into a fiber-coupled microcavity for use as an in vivo radiotherapy dosimeter to assess the dose delivered to the patient during treatment.

Benefits

- 8 articles
- 4 publications
- 1 publication underway
- 5 students involved
- The project has created job opportunities for 3 PhD students. 2 students stayed in Quebec to work at McGill.
- 3 jobs created for manufacturers
- 1 patent granted in the U.S., 2 others filed in China and Europe
- 2 prototype detectors resulted directly from this project
- Varian was acquired by multinational Siemens Healthineers for \$16.4 billion.

Partners



- Varian
- MUHC Foundation
- Research Institute of the McGill University Health Centre (RI-MUHC)

Success Story

12-B Mixed Reality Platform

Project Summary

Treatment of hallucinations in schizophrenia patients typically requires multiple trials of antipsychotic drugs. What's more, around one in three schizophrenia patients is resistant to antipsychotic treatments. A non-pharmacological alternative called avatar therapy has been developed and presents a significant reduction in feelings of distress and helplessness associated with auditory hallucinations. Although avatar therapy holds great promise, many questions remain unanswered about the conditions required for optimal administration of this treatment. Many technological improvements are conceivable and remain to be explored and tested, particularly in terms of how avatars are visually produced for patients and how they interact with them. Exploring these issues and improvements requires the development of a virtual reality platform offering the therapist the ability to easily adjust various parameters of the avatar(s). We will iteratively design, implement and

test such a platform, then apply the knowledge gained to an augmented reality version of the platform that can be used outside the therapist's office. This intelligent medical device will offer therapeutic benefits to patients in their daily activities.

Benefits

- 4 publications
- The success of this project has enabled Imd Research to develop a new project with the Shared Reality Lab. The company also has several ongoing projects with MEDTEQ+
- 1 patent (Canada/U.S.)
- 15 students involved
- During the project, the company became aware of the complexity of conducting research at a psychiatric institute (Douglas). However, the project has enabled Imd Research to review and refine its strategy in relation to this type of research.



Partners

- Imd research
- IA Précision Santé Mentale
- McGill University

Success Story

12-M Adaptive Planning

Project Summary

Cancer is modern society's Gordian Knot in terms of health-related illnesses. Recent studies predict that around 40% of men and women will be diagnosed with cancer at some point in their lives. Nearly half of all cancer patients are treated with radiotherapy during the course of their illness. The traditional process involves the acquisition of high-resolution anatomical images, on which manual annotation is performed during therapeutic planning and follow-up to delineate the structures of interest (target region and regions to be spared). However, it is a tedious and time-consuming task with poor reproducibility. Nevertheless, despite the enormous progress made in equipment, radiation oncologists agree that the current treatment planning system has various shortcomings, such as a lack of prediction of tumour response and sub-optimal management of dose plans for external radiation therapy. Radiotherapy requires the patient to be positioned in the same reference system as that used for treatment planning. Generally speaking, organ deformation resulting from patient weight loss and organ elasticity is not considered in the dose administration process, and the decision to re-estimate remains subjective. Through a multi-institutional collaboration (CHUM/McGill), the goal of the project is to develop a machine

learning-based platform for digital radiotherapy treatment planning from medical images, which are patient-specific and adaptable. This would make it possible to provide an evolving plan to attain the optimal individualized balance between tolerance constraints of healthy organs and tumour treatment through interventional MRI. The predictive models will be trained using over 20,000 retrospective cases. These innovations will help radiation oncologists and medical physicists not only track tumours during treatment, but also to optimally avoid critical structures around the tumour. By better avoiding healthy tissue, treatment could be concentrated on fewer treatments, thus improving treatment efficiency and accessibility.

Benefits

- 9 publications
- 1 patent filed
- 8 students involved in the project
- 1 job created at CHUM
- Contribution to research:
 - Development of a neural network
 - Synthetic CT image synthesis
 - Dose predictions based on CT images
 - Predictions of 4D images of probabilistic neurons



Partners

- Elekta
- Oncopole
- Polytechnique Montréal



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