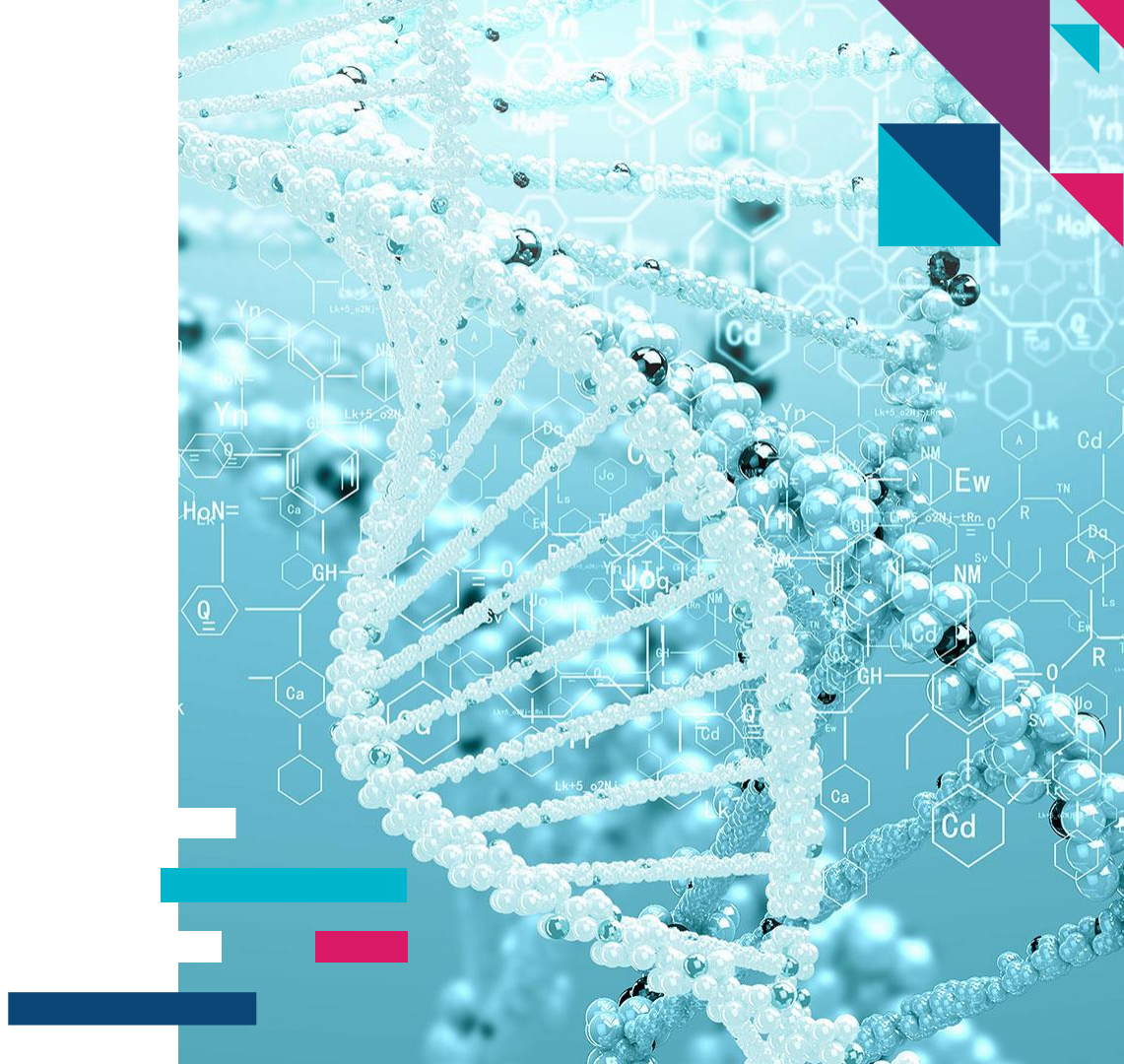


Greater Montréal: A Thriving Health Tech Hub



The world's best economic promotion agency at your service





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Montréal International's Personalized, Free and Confidential Services

A strong and growing metropolis, strategically located in North America



Population

- 4.3 million residents



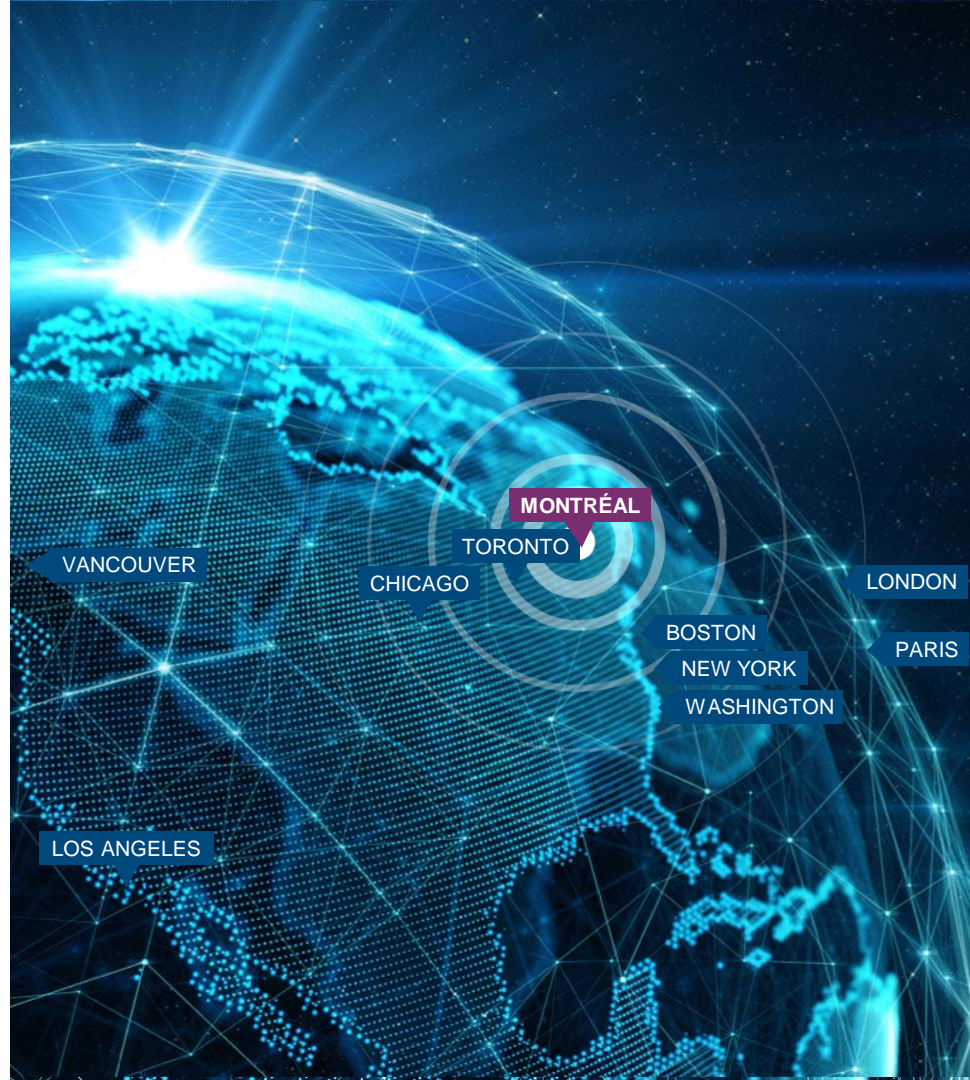
Economy

- **Fastest economic growth in Canada in 2018 and 2019**
- **\$2.6 billion in foreign direct investment** in 2019 supported by Montréal International



Location

- **82 municipalities**, 1 metropolitan area
- **A 90-minute** flight to Boston and New York City
- Less than a **one-hour** drive to the U.S. border



01

Life Sciences: A Strategic Sector for Québec



Québec's ambitious Life Sciences Strategy

Four key objectives

- 1 Increase Investment in research and innovation in all life sciences
- 2 Foster the creation of innovative companies and ensure their growth
- 3 Attract new private investment
- 4 Further integrate innovation into health and social services network

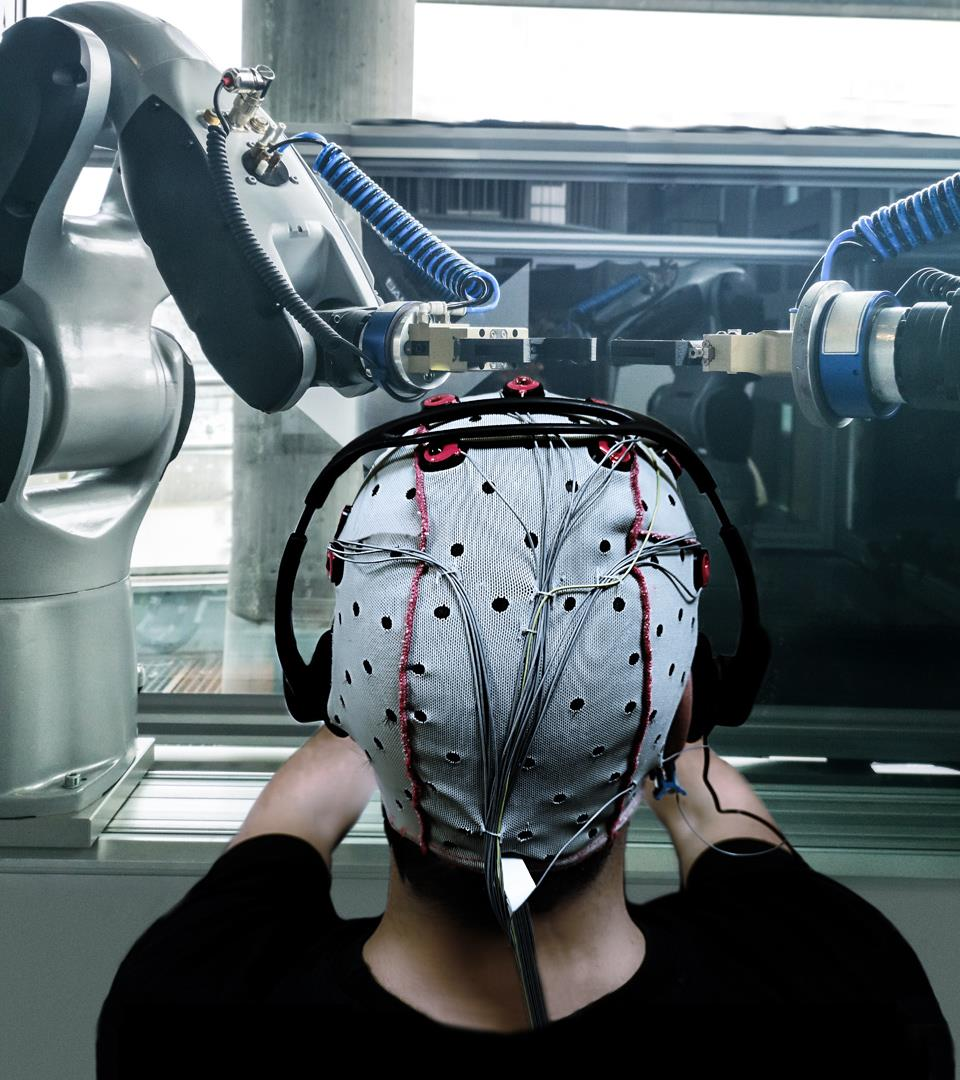
Two priority niches to position Québec internationally

- 1 Precision medicine
- 2 Big Data in the health sector

Two goals

- 1 Attract **\$4 billion** of private investment in Québec by 2022
- 2 Make Québec one of the **Top 5** North American life sciences clusters by 2027





Many key programs within the Québec strategy are fostering the Health Tech sector



Creation of an innovation bureau and the Chief health innovation strategist position



Creation of an innovation support fund



Optimized and accelerated process for the integration of innovative health technologies

02

A Unique Interconnected & Collaborative Ecosystem



Canada's fast growing medical device market

Ranked **8th**
globally*

US \$6.7 B

Medical device market size
(2017)

5.7%

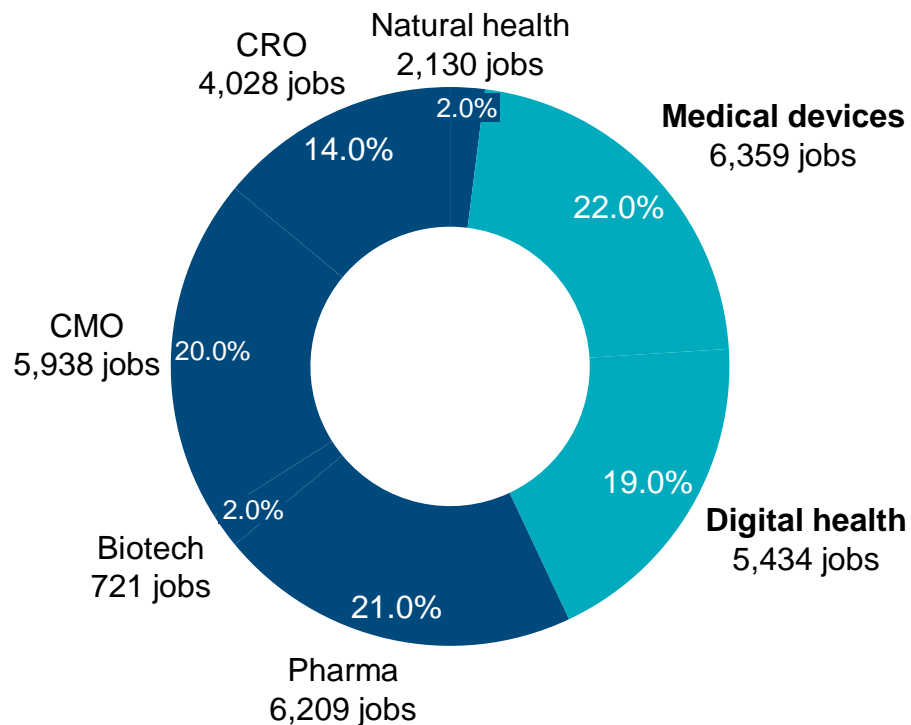
Compound annual growth
rate in revenues 2016-
2021(in US\$)

*The Canadian medical device market was ranked 8th in the world in terms of value in 2017.

Source: BMI Research's Worldwide Medical Devices Market Factbook 2017, Invest in Canada, 2017: http://www.ic.gc.ca/eic/site/lsg-pdsv.nsf/eng/h_hn01736.html.

Québec boasts a thriving health tech sector

Distribution of jobs in Québec's life sciences and health tech (%)



Québec life sciences and health tech sector



56,000

Total jobs (80% concentrated in Greater Montréal)

Québec health tech sector

- **40%+** of all jobs and
- **50%+** of companies

Medical devices

151 companies

6,400 jobs

Digital health

169 companies

5,400 jobs

Numerous Health Tech companies are booming in Montréal

Foreign subsidiaries

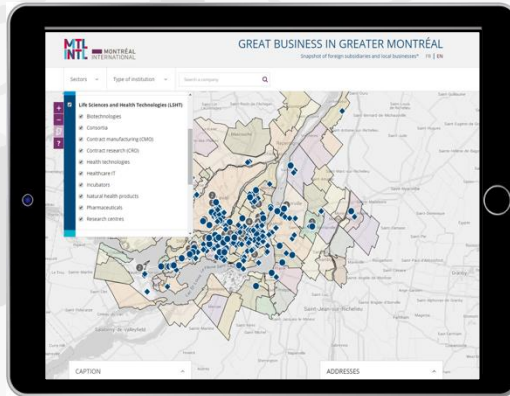


Local companies



Major hub to boost business partnerships throughout the region

Click [here](#) to visit our interactive map of companies



BIOTECH CITY

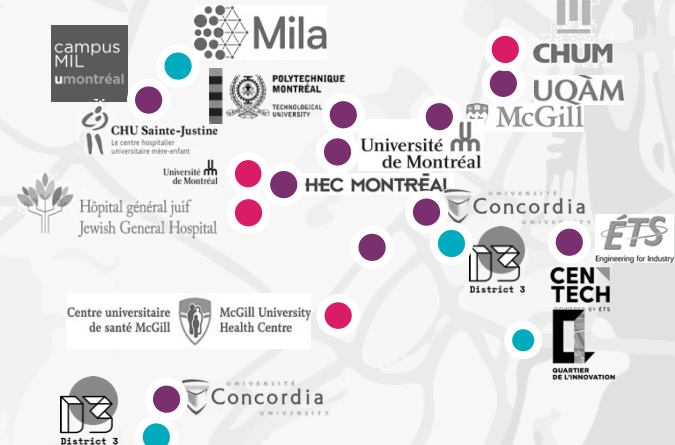
CQIB
L'incubateur
des sciences de la vie

adMare
BIOINNOVATIONS

TM
TECHNOPARC
MONTRÉAL



Trudeau
International Airport



Innovation centre – fall 2020

Legend

- Industrial park / innovation cluster
- University Hospital Centre
- University

World-renowned scientific excellence centres and infrastructures

Montréal is reputed for its **collaborative approach**
(Research – Industry – Government)

Recent major investments in **cutting-edge infrastructures**:



**Centre hospitalier
de l'Université de
Montréal (CHUM)**

500,000
ambulatory
visits/year



**McGill University
Health Centre
(MUHC)**

220,000
ambulatory
visits/year



**CHU Sainte-Justine,
Mother & child
university hospital
center**

80,000
ambulatory
visits/year

Research centres



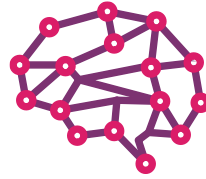
Montréal has developed an internationally-acclaimed expertise in several fields



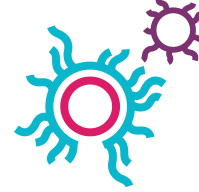
Oncology



**Cardio-vascular
and metabolic
diseases**



**Neuroscience
and mental
health**



**Infectious
diseases**



Aging



**Cellular therapy,
regenerative medicine**

Rare diseases



**Medical imaging
and cytometry**



**Precision medicine
(genetics, genomics
and proteomics)**



**Big Data and
artificial intelligence**

Many opportunities for foreign investors within the Montréal's Health Tech strategic axes



Connected health

ITC

- Patient autonomy patient and home-based care
- Mobile applications
- Wellness
- Healthcare logistics
- Electronic medical record
- Optimisation of operations

TELEHEALTH

- Telemedicine
- Remote monitoring
- Remote training

BIG DATA

- Diagnostic assistance
- Tailored treatment
- Genetic profile
- Predictive analysis
- Internet of things



Imaging and simulation

VISUALIZATION

- Diagnosis support

SURGICAL APPLICATIONS

- Surgical planning
- Guiding
- Surgical robots

MEDICAL TRAINING

- Health personnel
- Specialized training



Human performance

PREVENTION

SPORTS MEDECINE

- Injury prevention
- Performance improvement

REHABILITATION

- Prostheses
- Physiotherapy
- Environment adjustment
- Recovery
- Biomechanics



Personalized health

DIAGNOSIS

- Biomarkers
- Near-patient tests

CUSTOM SOLUTION

- Implants
- Targeted treatment

NEUROSCIENCE

CARDIOLOGY

ORTHOPEADICS

ENABLING TECHNOLOGIES

Textiles

BioMEMS

Biomaterials

Plastics/Polymers

Nanotechnology

World-class Health Tech university research chairs



- Canada Research Chair in orthopedic Engineering & NSERC/Medtronic Industrial
- Research Chair in Spine Biomechanics
Chairholder: Carl-Éric Aubin
- Canada Research Chair in Quantitative Magnetic Resonance Imaging
Chairholder: Julien Cohen-Adad
- Canada Research Chair in Medical Imaging and Assisted Interventions
Chairholder: Samuel Kadoury
- Canada Research Chair in Vascular Optical Imaging
Chairholder : Frédéric Lesage
- Canada Research Chair in Medical Nanorobotics
Chairholder: Sylvain Martel
- Canada Research Chair in Fabrication of Advanced Microsystems and Materials
Chairholder: Daniel Therriault
- Canada Research Chair in Mechanobiology of the Pediatric Musculoskeletal System
Chairholder : Isabelle Villemure



- Canada Research Chair in biomedical data-mining
Chairholder: Neila Mezghani



- Canada Research Chair in 3-D Imaging and Biomedical Engineering
Chairholder: Jacques de Guise
- Canada Research Chair in Biomaterials and Endovascular Implants
Chairholder: Sophie Lerouge
- Canada Research Chair in Engineering Innovations in Spinal Trauma
Chairholder: Yvan Petit



- Canada Research Chair in Micro and Nanobioengineering
Chairholder: David Juncker
- Canada Research Chair in Biosynthetic Interfaces
Chairholder: Marta Cerruti



- Canada Research Chair in Biomedical Imaging and Healthy Aging
Chairholder: Habib Benali

Examples of flagship programs to accelerate discovery, development and commercialization



Consortium for Industrial Research and Innovation in Medical Technology



Business incubator dedicated to high-tech companies, for instance medical technologies and manufacturing



Accelerator for medical technology companies

MEDxlab

Accelerator for digital health created by Centre québécois d'innovation en biotechnologie (CQIB) and Campus des technologies de la santé (CTS)



Startup accelerator and entrepreneurial community located within Concordia University



Connector and facilitator for the neurotechnology community providing key resources and technological initiatives



Concordia's New Science hub

TransMedTech Institute, a unique transdisciplinary open innovation hub



- Supports the **development of next-generation medical technologies** for important diseases to facilitate their implementation in the health system and industry
- **Living Lab** focused on users and needs dynamics fostering transdisciplinary and intersectoral collaborative research, open innovation and creativity.
- **Partners and founding institutions**



Confirmed initiatives since 2017:

- **47** projects in development
- **7** Chairs /recruited professors
- **40** Platforms
- **84** Students / 3 training programs (entrepreneur, industry, academic)
- **74** Scientists/clinicians
- **63** Partnering institutions companies
- **36** HQP

Strong venture capital funding from various players in Québec

- Since 2018 in Montréal: more than **US\$2.7 billions** in **VC investments**
- 6 of the 8 most active VCs in Canada in 2019 are based in Montréal
- Example of funding for life sciences companies:



raised **US\$82.5 M** – September 2019



raised **US\$80 M** – October 2018



raised **US\$60 M** – May 2020



raised **US\$37 M** – January 2020



raised **US\$30 M** – July 2020

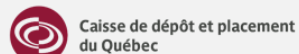


raised **US\$29 M** – July 2017

Private venture capital



Institutional partners



Montréal is home to Canada's AI cluster headquarters



SCALE AI

Canada's AI supply chain supercluster



**Forum
IA Québec**

Québec's AI organization fostering the development of Québec's AI ecosystem



**Other health related
Canadian superclusters**



**DIGITAL
TECHNOLOGY
SUPERCLUSTER**

a cross-industry
collaboration in healthcare,
communications, technology

NGen

Next Generation
Manufacturing Canada

The Innovative
Manufacturing supercluster:
manufacturing 4.0

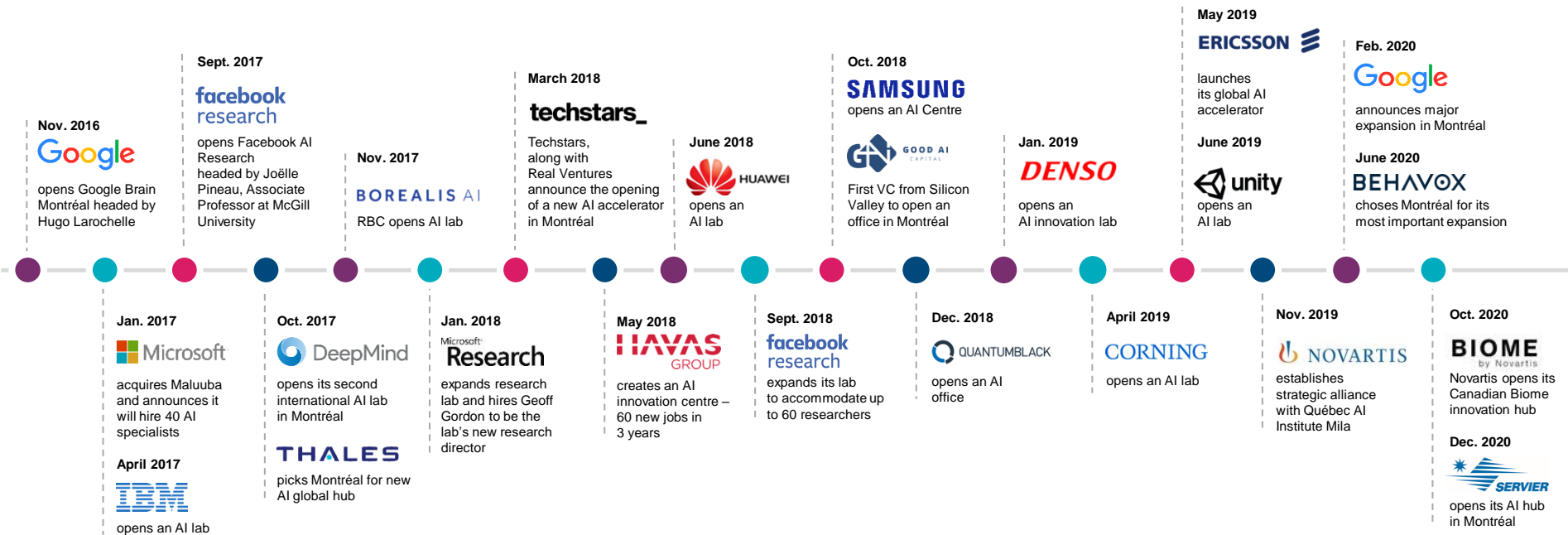


Mila, a thriving AI hub in the Mile-Ex neighborhood

- With **600+ researchers**, Mila is the **world's largest academic research lab specialized in deep learning and reinforcement learning**
- A collaborative ecosystem of AI researchers, startups and major companies
- Examples of strategic global partners within Mila:



A few of the world leaders developing their AI expertise in Montréal



Other foreign companies flourishing in Greater Montréal



Examples of Montréal-based companies using AI in healthcare



IMAGIA: developing radiomics biomarkers and clinical decision support systems



My Intelligent Machines: accelerating post genomic research by leveraging AI & bioinformatics



QUANTUMBLACK: using data, analytics, and design to optimize how drugs are brought to market



InVivo AI: facilitating accurate toxicity screening in the earliest phases of drug discovery



Corstem: medical imaging analysis and computer vision, using machine learning



Informed experiments: distilling the complexity of gene interaction networks with AI algorithms to accelerate cancer research



Precision analytics: predictive analytics and cloud computing to handle large datasets



Diagnos: early detection of critical health issues through the use of AI



Mr Young: AI-powered chatbot designed to help cope with anxiety



Myelin: AI synthesis of ASD scientific data



Innovie Health: AI solution to drive the most accurate care management strategy for healthcare system



Arctic Fox AI: AI-assisted radiology for Alzheimer's and related dementias



BIOS: developing neural interfaces to enable AI-based treatments on organs and nerve systems throughout the body



Zilia: combines imaging, spectrometry and AI for the detection of biomarkers involved in ocular, neurological and systemic conditions



Key initiatives at CHUM to facilitate data access and the use of AI

Data lake project CITADEL

- **The Center for the Integration and Analysis of Medical Data (CITADEL)** of the Centre hospitalier de l'Université de Montréal (CHUM) is one of the initiatives adopted to facilitate learning, teaching and communication:
 - 20 integrated information systems
 - 19.4 million episodes of care
 - 3.6 million patient data

School of AI in Healthcare (SAIH)

- Devoted to the study of the social, legal and ethical implications of **AI in the health sector**
- Doctors and researchers at the CHUM are pursuing **80 projects involving artificial intelligence**

Some examples of Montréal's expertise in VR and AR in healthcare



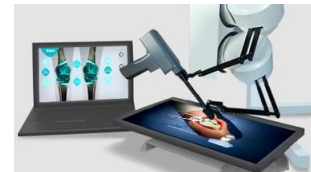
Pixel Dairy Productions Inc.
pixelmolkerei
creative company

VR Ecosystem, mixed and augmented reality: Designed for medical healthcare companies




JINTRONIX

VR rehabilitation system



OSSimTech™

VR open surgery simulators in orthopedics




PAPERPLANE
THERAPEUTICS

VR video games to reduce pain for children receiving medical care

At the forefront of AI for good initiatives

- For ethical & responsible AI



Montréal Declaration
Responsible AI_

An initiative of the Université de Montréal

Since December, 2018
more than 1,900 signatures
from citizens and 108
organizations

- Research centres with AI for good initiatives



Fostering a dialogue on the socially responsible use of AI and the development of social and environmental applications.
Montréal's AI4Good lab aims to get more women working in Artificial Intelligence and other events

HumanIA

Directing AI towards the common good through humanistic and multidisciplinary studies and research

ELEMENT^{AI} Opened an office dedicated to AI for good



TechAide AI4Good Conference and Hackathon 2020

**SINCE ITS OFFICIAL LAUNCH IN 2016,
TECHAIDE HAS RAISED \$1.34M FOR
CENTRAIDE**

03

A Deep and Growing Pool of Highly Qualified Talent



The best student city in the Americas and Canada's university capital

- Canada's university capital: 11 university institutions and 60 colleges
- 320,000 post-secondary students, including more than 200,000 university students and 35,500 international university students
- \$1+ billion in funding yearly dedicated to university research
-  Best student city in the Americas
2019 QS Best Student Cities Rankings



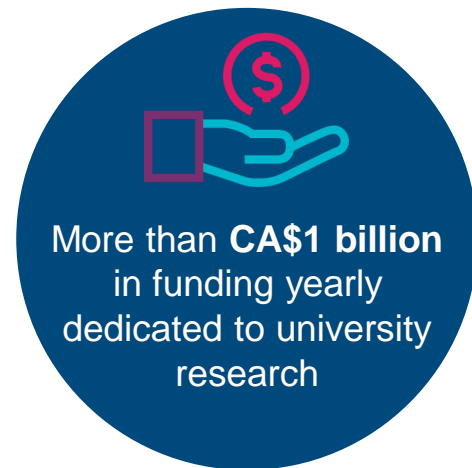
A large pool of university students in life sciences and STEM-related programs* in Québec



More than **50,000**
university students (80% in Greater Montréal)



More than **16,000**
graduates (80% in Greater Montréal)



A pool of highly qualified workers

Life sciences and STEM-related occupations in Greater Montréal

Employees in 2019

Life sciences professionals (including chemists, chemical engineers and biologists, etc.)	12,800
Other engineers (including Industrial, manufacturing and computer engineers)	15,900
Computer and information systems professionals	96,700
Mathematicians and statisticians	3,200
Total	134,500



04

Attractive Operating Costs and Incentives



Competitive operating costs among the 20 largest metro areas in Canada and the U.S.

1st clinical trials and life sciences R&D centre¹

1st Software development centre

2nd bio-pharma manufacturing²

2nd medical devices manufacturing plant

Source: fDi Benchmark, 2020.

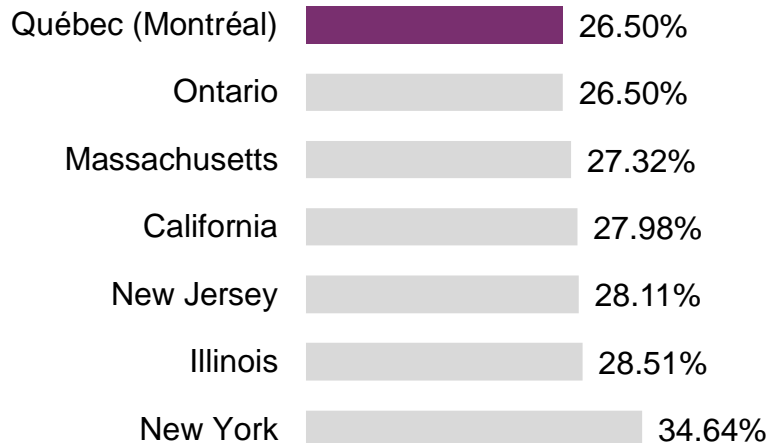
1: Research, discovery, design, development or testing of biotechnology or pharmaceutical related products and/or medical devices.

2: Companies in this industry develop and manufacture therapeutic products and in vitro diagnostics using biotechnology.



Québec offers corporations an attractive tax treatment

Comparison of corporate effective tax rate (%) Selected Canadian provinces and U.S. States, 2020



Advantageous salaries for Health Tech employers

Median annual salaries* (US\$) for ten typical occupations in **Health Tech**

	Montréal	Toronto	Raleigh	Dallas	Minneapolis	San Diego	Boston	San Francisco
Quality Assurance Specialist	\$46,987	\$50,182	\$64,983	\$67,243	\$70,619	\$71,395	\$77,687	\$82,744
Clinical Liaison	\$48,475	\$51,856	\$64,023	\$69,060	\$70,549	\$72,848	\$75,686	\$83,116
Project Management Specialist	\$49,134	\$52,708	\$64,251	\$68,201	\$67,965	\$70,323	\$76,565	\$82,896
Regulatory Affairs Specialist	\$54,790	\$58,711	\$73,270	\$77,753	\$76,527	\$79,505	\$86,553	\$93,902
Manufacturing Engineer	\$60,265	\$64,136	\$84,097	\$91,589	\$89,795	\$93,696	\$98,279	\$104,457
Field Service Manager	\$63,851	\$67,413	\$ 92,067	\$97,846	\$ 97,518	\$100,912	\$109,781	\$119,634
Mechanical Engineer	\$66,722	\$70,821	\$96,508	\$104,962	\$101,776	\$106,528	\$111,375	\$118,889
Project Leader	\$67,522	\$72,231	\$101,063	\$106,866	\$103,321	\$109,666	\$1116,500	\$126,748
Software Developer	\$67,954	\$72,058	\$100,264	\$105,769	\$101,952	\$108,337	\$113,523	\$125,464
Production Manager	\$73,750	\$78,749	\$106,384	\$114,101	\$109,002	\$113,338	\$123,317	\$134,021

* Base salaries based on 5 years of experience, Medical Device Manufacturing (NAICS 3391).

Currency exchange CA\$1 = US\$0.72.

Source: Economic Research Institute, Inc., May 2020.

Various incentives tailored to your project



Canada

- ▶ Strategic Innovation Fund
- ▶ Canada Economic Development for Québec regions
- ▶ Tax credit on SR&ED
- ▶ Mitacs Acceleration program for talent
- ▶ Support for technology innovation



Québec

- ▶ ESSOR Fund for Major Projects
- ▶ Tax credits for Large Investment Project
- ▶ Refundable Tax credit on R&D
- ▶ Tax Credit for Investments and Innovations (C3i)
- ▶ Deduction for the Commercialization of Innovations (IDCI)
- ▶ Financial assistance for job creation and training
- ▶ Tax holiday for foreign experts and researchers



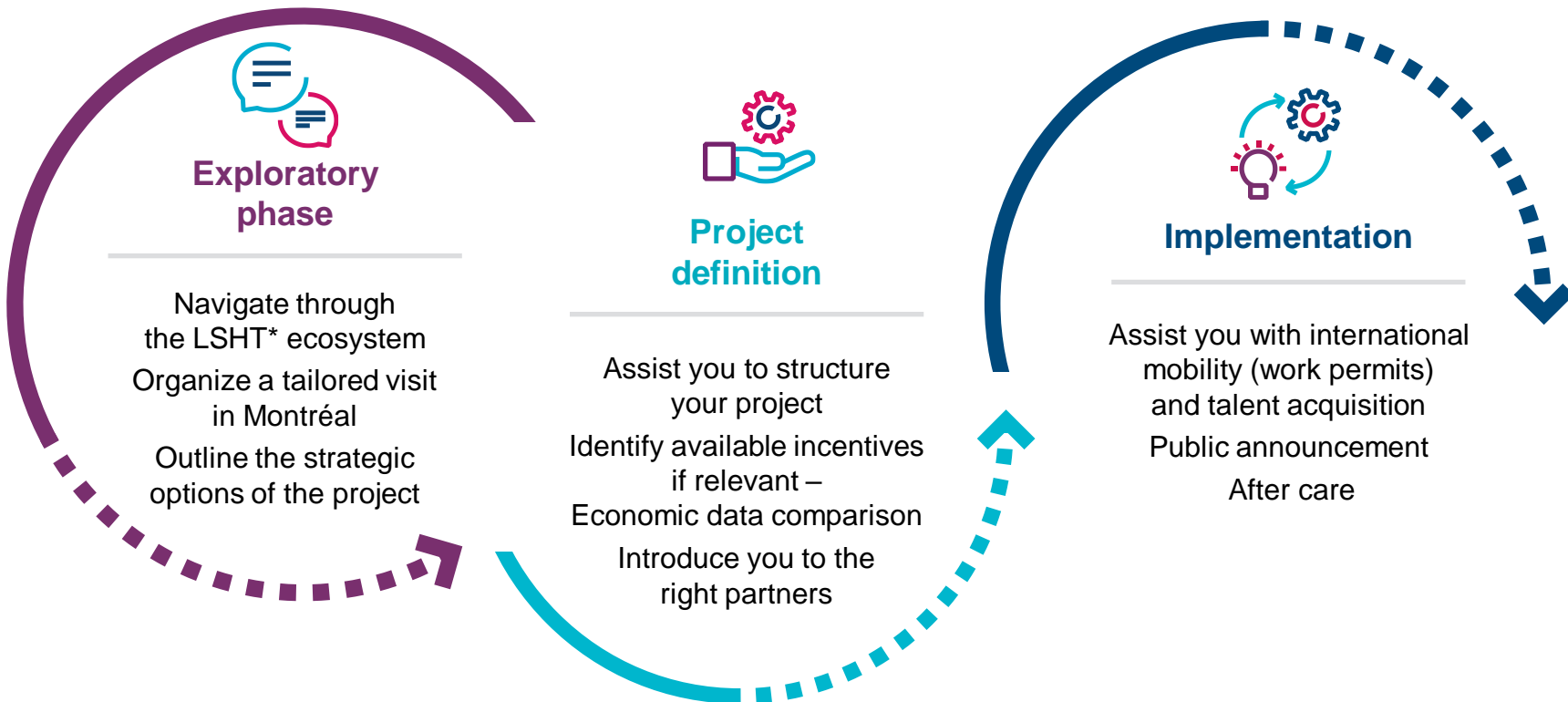
Sustainable development programs are also available at the municipal level

05

Montréal International's Personalized, Free and Confidential Services



Your development in Montréal: Montréal International can assist you through the whole process





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