



**CANADA  
FIRST**  
RESEARCH  
EXCELLENCE  
FUND

**APOGÉE  
CANADA**  
FONDS  
D'EXCELLENCE  
EN RECHERCHE



MONTRÉAL

# TRANSMEDTECH

INSTITUTE

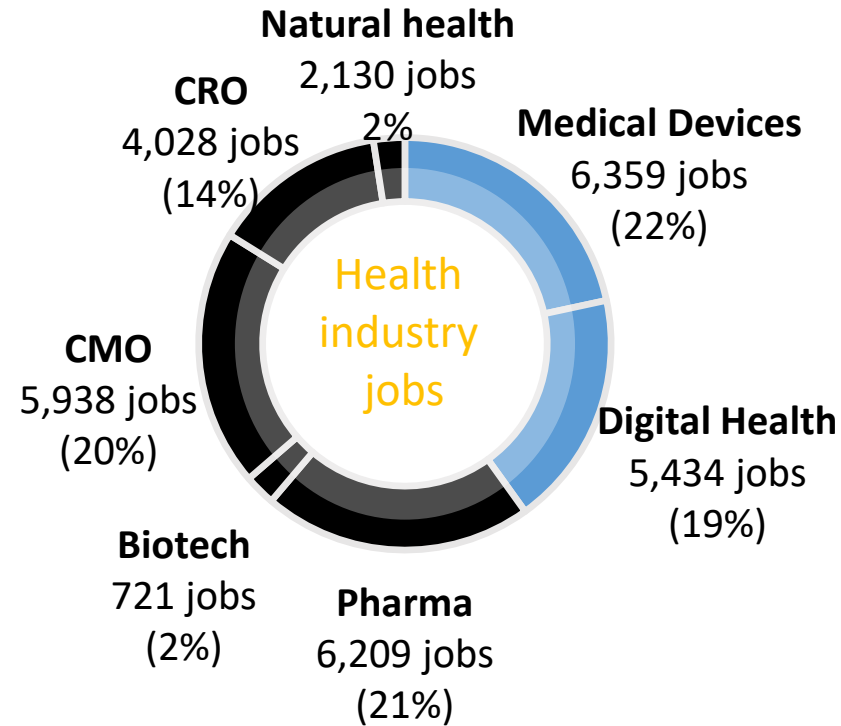
TOGETHER  
FOR A HEALTHY  
FUTURE

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Deputy Director  
September 17, 2019



# MEDTECH innovation, a key strategic goal for Quebec

Sources: Ministère de l'Économie,  
de la Science et de l'Innovation, 2017; Montréal InVivo 2017



**+56,000**  
industry jobs  
(40% of all jobs)

**40,000 in  
Montreal**

**650**  
companies  
  
50% of  
companies

**\$ 5.6 B**  
estimated  
impact  
on Quebec's  
GDP  
(2014)

**\$8B** invested last 5 years in new  
hospital infrastructures in Montreal

**\$205M** Quebec's life sciences  
strategy (2017 – 2022)

# Canada First Research Excellence Fund



CANADA'S ECONOMIC ACTION PLAN



**\$1.4B** investment to support competitively selected Canadian postsecondary institutions to turn their key strengths into world-leading capabilities:

- compete with the best in the world for talent, for partnership opportunities, and to make breakthrough discoveries;
- seize emerging opportunities and strategically advance their greatest strengths on the global stage; and
- implement large-scale, transformational and forward-thinking institutional strategies.

**Polytechnique Montréal \$95.6M**

**Award amount: \$35,625,000**

**+ \$60M from partnering institutions**



CANADA FIRST RESEARCH EXCELLENCE FUND

APOGÉE CANADA FONDS D'EXCELLENCE EN RECHERCHE

**The Montreal TransMedTech (iTMT) Institute: An open-innovation ecosystem for the development of next generation medical technologies**



# TransMedTech Institute

## Mission

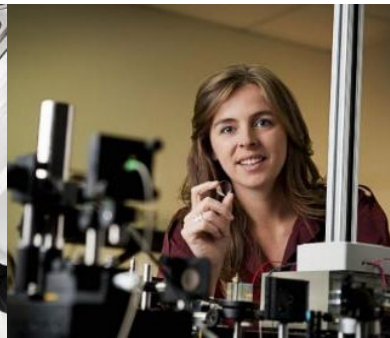
- To support the development of next-generation medical technologies for important diseases, in order to facilitate their implementation in the health system

## Vision

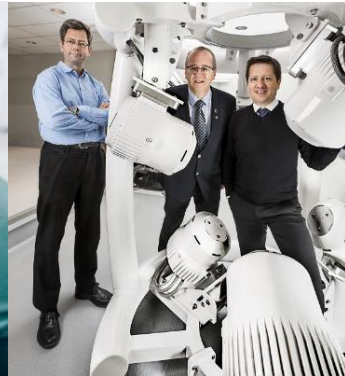
- To have a significant impact on health, the medtech industry, the training of tomorrow's HQPs and society

## Strategy

- Living Lab model (interdisciplinary & intersectoral open innovation environment driven by users and the dynamics of needs, favorable to creativity and innovation, to facilitate the validation and implementation in the healthcare environment)



# Living Lab - a place of innovation with and for users



## Open interdisciplinary and intersectoral innovation process

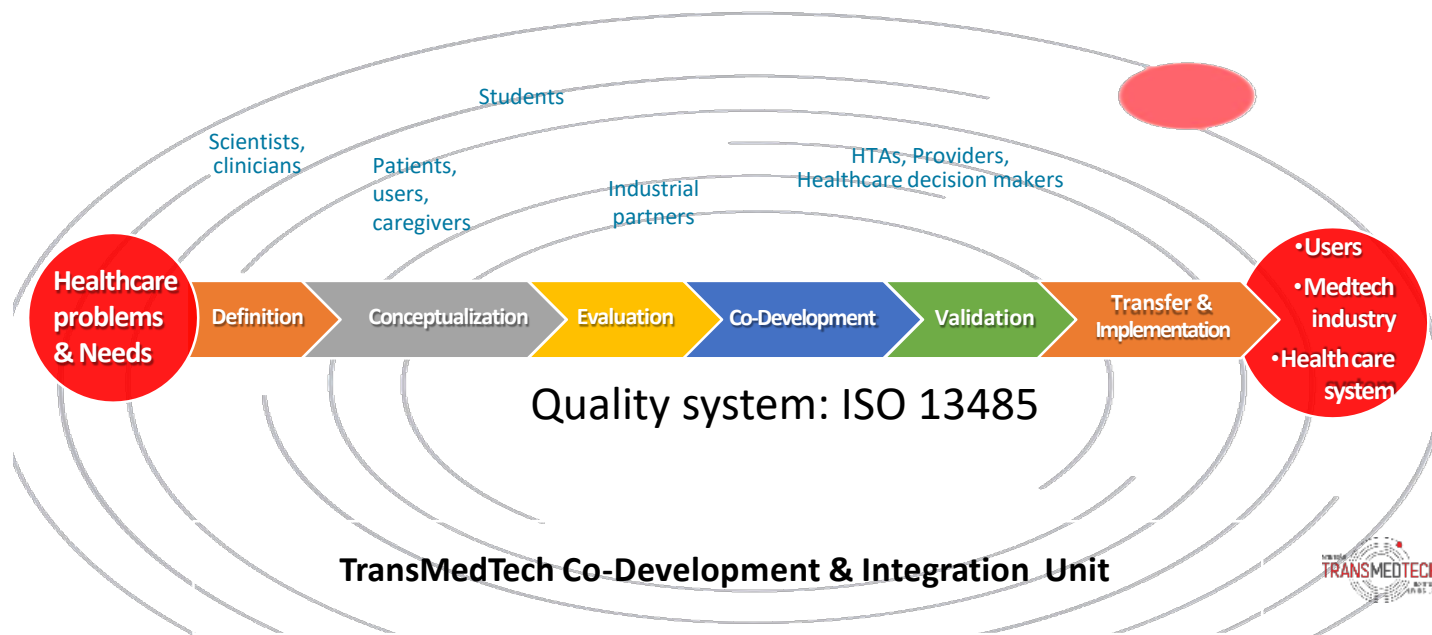
- Driven by users and the dynamics of needs

***Users:** patients and their entourage, community, health professionals, health system managers, technical professionals*

- Favorable to creativity and innovation
- Allows validation and implementation in hospital settings



# TransMedTech Living Lab



# TransMedTech Ecosystem

**POLYTECHNIQUE MONTRÉAL**

**Université de Montréal**

Centre of Excellence in Research and Biomedical Engineering  
 • >200 Principle Investigators & Research Associates

**CRCHUM**

**CHUM**

Adult General Research Hospital  
 570 Researchers & Research Personnel

**CHU Sainte-Justine**  
 Le service hospitalier universitaire maternité

**Université de Montréal**

Mother-Child Research Hospital  
 222 Researchers

**TECHNOPÔLE**  
 READAPTATION PÉDIATRIQUE

New Pediatric Rehab Technopole

**Lady Davis Institute**  
 210 Researchers

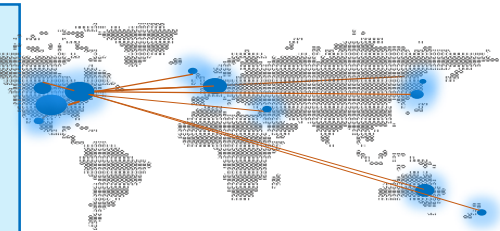
**Hôpital général juif**  
 Jewish General Hospital

TransMedTech Ecosystem

... intersectoral partners

... international network

<p><b>Universitaires</b></p> <p>POLYTECHNIQUE MONTRÉAL, mosaic, HEC MONTRÉAL, Université de Montréal, Pôlesant, HEC MONTRÉAL, OOO</p>	<p><b>Hospitaliers</b></p> <p>CHU Sainte-Justine, HEC MONTRÉAL, Hôpital général juif, CRCHUM, CHUM</p>	<p><b>Patients, associations etc.</b></p> <p>ALTERGO, Centre d'assistance au patient, HEBERT, STEIN GROUP</p>	<p><b>Industriels</b></p> <p>Medtronic, QesKin, streamline GENOMICS, AVISIO, ZIMMER BIOMET, BDF, SIEMENS, ODS, OSSimTech, LINK Health Analytics, STARPAX, Photonix, castor, KINOVA, Medicus, caboma, RODIN, PHARMEC, AlpheTAU</p>
<p><b>Gouvernementaux et autres</b></p> <p>Québec, LI, CDRIN, MEDEC, CEN TECH, IFSSTAR, MaRSEXCITE, BIOVALLEY france, MEDTEQ, prompt, cqdm, medicen, WYSS INSTITUTE</p>	<p><b>Fondations</b></p> <p>FONDATION DE RECHERCHES, Fondation CHU Sainte-Justine, Jewish General Hospital Foundation</p>		



# Priority technological axes

	NEURO MUSCULOSKELETAL DISORDERS	CARDIOVASCULAR DISEASES	CANCERS
REHABILITATION TECHNOLOGIES	●		
BIOSENSORS AND MEDICAL MICRODEVICES		●	●
PROGNOSTIC TESTS OF PROGRESSIVE PATHOLOGIES	●	●	
MINIMALLY INVASIVE TREATMENT DEVICES	●	●	
LASER THERAPIES, BIOPHOTONIC PROBES	●	●	●
NANOROBOTICS AND THERANOSTICS TECHNOLOGY	●	●	●
MULTIMODAL INTERVENTIONAL IMAGING	●	●	●





# iTMT and THE BEACHHEAD™ PROGRAM



Partnership between Centers of Excellence and companies  
Fast-track for ADOPTION



Access to KOLs,  
platforms, data...



Controlled process in  
real care environment



Collaborative  
approach



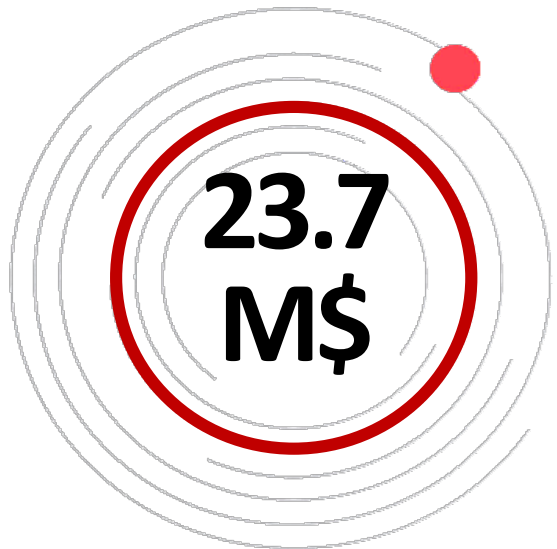
To accelerate  
technologies  
adoption

Targeting 15+ Beachhead™ in Canada and INTL





# TransMedTech realizations since Sept. 2017



**47**

**PROJECTS**

**60**

**STUDENTS**

**7**

**CHAIRS**

**21**

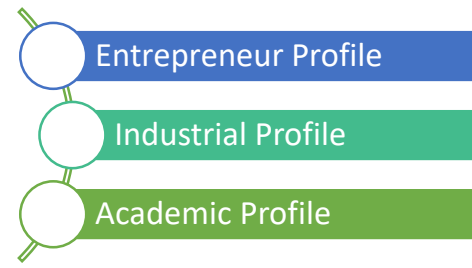
**HQP**

**17**

**PLATFORMS**

**74**

**RESEARCHERS**



**63**

**PARTNERS**



MONTREAL  
**TRANSMEDTECH**  
 INSTITUTE

[www.transmedtech.org](http://www.transmedtech.org)

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