## **HACKING HEALTH** BRINGING INNOVATION TO HEALTHCARE





## By working together, collaborating and taking action, we can innovate healthcare in thousands of new ways.

We are from 21 countries and we all share the vision to improve healthcare. For ourselves, our families, our friends, our communities and our countries. We each have different stories, motivations and skills. We joined forces to challenge the status quo, enable collaboration, accelerate innovation, and build a movement of global magnitude. Together.

#### 2015-2016 WAS A RICH AND FULFILLING YEAR FOR HACKING HEALTH.

Hacking Health welcomed many leaders from new cities and new countries. The relentless drive to break down innovation in healthcare in so many parts of the world does not cease to surprise us. It fuels the expansion of our movement. In these new geographies, we focused on getting in gear, structured community building, fostered rapid learning, made people work together via hackathons. We took our cities by storm!

In the more mature geographies, we pushed the limit of what can be achieved through Hacking Health. We expanded our common repertoire of tools and experiences, invented new ways to achieve our mission.

Drawing strength from our communities' enthusiasm, we increasingly steer efforts towards achieving long term impact. We launched a digital

health accelerator in Canada, and advisory services in France. We joined or bolstered or created digital health clusters in key regions. We teamed up with investors and accelerators in emerging areas, helped create innovation platforms in hospitals.

In all cases, as always, we channel grassroots involvement, harnessing the contribution of thousand of innovators who delivered hundreds of concrete innovative solutions. As always, we collaborate with all stakeholders to achieve this common purpose.

This yearbook is our way to introduce ourselves, our teams, our leaders, and give you a perspective of what Hacking Health is all about. With this yearbook we've decided to give insight on some of our activities, achievements and highlights of the year. We hope to show the richness and reach of some of communities and networks, around the globe. We hope to provide a clear picture of what we stand for, what we are capable of, and how we can drive innovation in healthcare together.

#### The 180 Hacking Health Leaders



# THE HACKING HEALTH MANIFESTO

## Hacking Health is a global movement to improve healthcare.

We choose to unite in the pursuit of a common mission: Breaking down barriers to innovation in healthcare.

In the face of increasingly complex health issues, we engage all stakeholders inside and outside the healthcare sector. By facilitating cross-disciplinary collaborations, we help generate fresh insights and creative solutions to current challenges. We find new ways to make the best ideas emerge and generate lasting impact.

In these days of fundamental societal transformation driven by technology, we bring together patients, healthcare professionals, physicians,

technologists, designers, entrepreneurs, decision makers, business leaders, researchers, administrators and governments to work collaboratively and resolve tangible issues.

#### FROM THE BOTTOM UP. BETTER. FASTER.

Do you want to bring about meaningful change in healthcare? Are you looking to make a change in a complex system, to shift the focus to patients and solutions?

Welcome to Hacking Health.

## PROGRESSIVELY BUILDING ECOSYSTEMS OF INNOVATION

Events are a way to connect, engage, educate, inspire, but the ultimate goal is to transform healthcare. Hacking Health leaders and communities tackle this endeavor one step at a time, relentlessly growing in impact and maturity towards that final vision. Ultimately, Hacking Health leaders act as brokers of innovation in their communities.

**STEP 1** 

### BUILD COMMUNITY

Connect stakeholders: healthcare professionals, patients, developers, engineers, designers, clusters, entrepreneurs, investors.

#### STEP 2

### SHARE KNOWLEDGE

Allow these communities to meet in person and exchange by hosting year round events. We help actors teach others about technology, healthcare and creativity through Cafés, Conferences, Workshops.

### ENABLE COLLABORATIVE ACTION

STEP 3

Partner with other organizations to enable collaborative action which act as catalyzers: design days, ideathons, hackathons, design challenges, cooperathons.

### ACCELERATE IMPACT

**STEP 4** 

Facilitate collaborative action and project implementation - this is made possible through the strong connections now established between participants and partnering institutions & companies. This is also where accelerators and incubators help or create some startups. STEP 5

### TRANSFORM INSTITUTIONS AND REGIONS

Help organizations transform themselves so they generate ideas, design solutions, implement projects, continuously innovate. Make them work hand in hand with their patients and communities. Create inspiring examples for other communities to emulate. CHU Le centre universita

**PIONEERS** 

### **CHU Sainte-Justine**

Le centre hospitalier universitaire mère-enfant

> Université **m** de Montréal

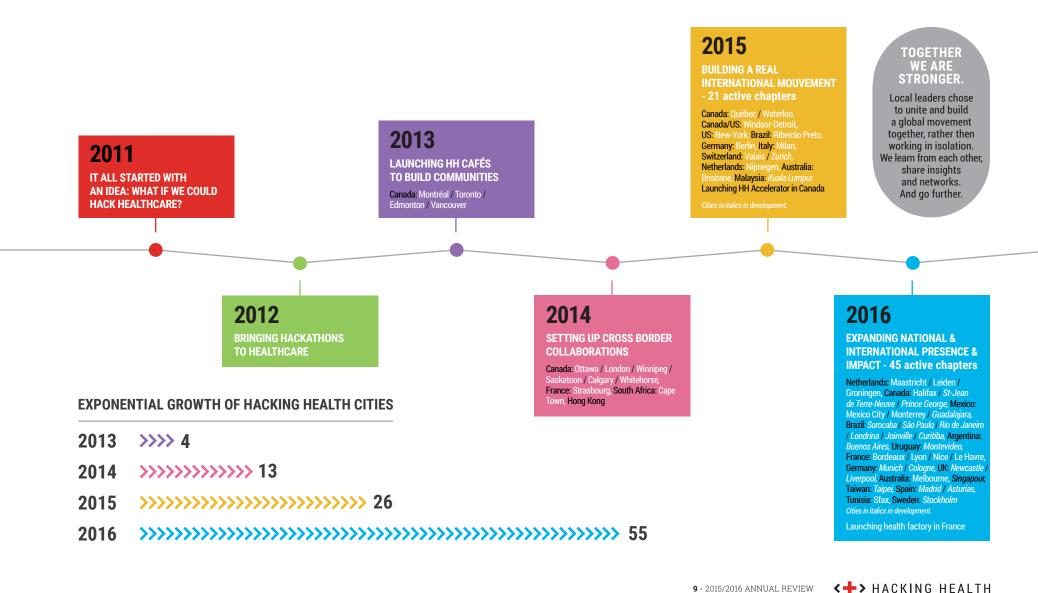
In 2014, Sainte-Justine Montreal's leading Mother Child Research Hospital invited Hacking Health to hold a hackathon inside their hospital walls. From there emerged a collaboration allowing the hospital to develop a deployment program for innovative projects. The program is now managed full-time by one of the hospitals hackathon participants.

# CHEO

Hacking Health Ottawa and its anchor partner CHEO-OCTC (Children's Hospital of Eastern Ontario/Ottawa's Children Treatment Center) jointly launched "HIP" – Ottawa's first Health Innovation Program. This program formalizes the collaboration and processes to include the whole community in these flagship hospitals' innovation efforts. SECTION SECTION

# A HISTORY OF SPARKING INNOVATION AND GROWING IMPACT

The organization was founded to relentlessly spearhead improvements in healthcare. This goal remain our guiding beacon over time.











Spain Australia Taiwan

**France** Great Brita

**Great Britain** 

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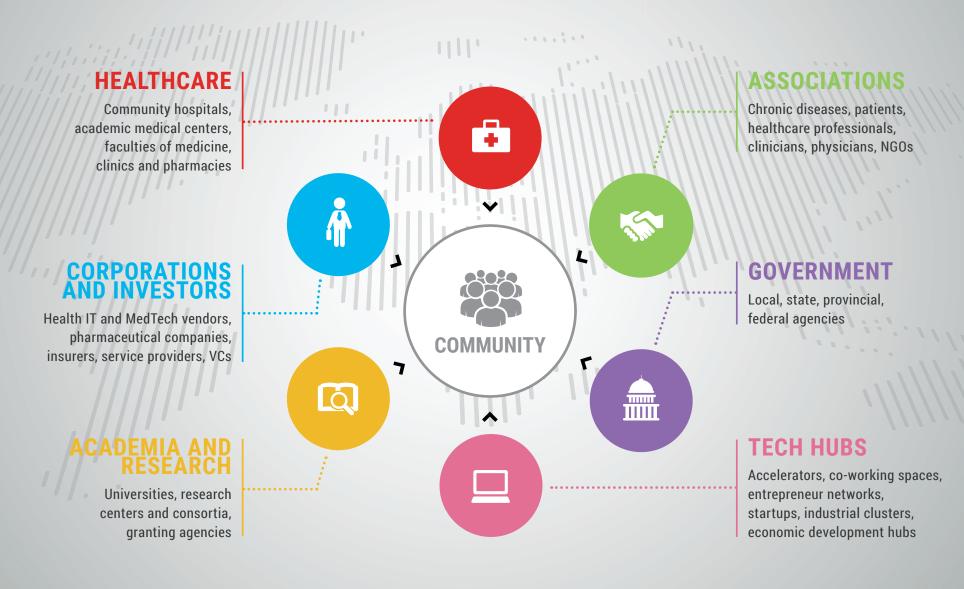






# HACKING HEALTH **ACTS IN SYNERGY** WITH ALL KEY **ACTORS &** STAKEHOLDERS

In all cities and regions, Hacking Health systematically engages and works hand-in-hand with established actors. Together, as complementary actors, we achieve stronger results. We're here to re-energize partners with new tools, resulting in modern approaches to our partners' own missions. We're not just getting individuals to work together. We're fostering collaboration between organizations, too.



## EXAMPLES OF COMMUNITIES & NETWORKS: THE AMERICAS

#### **REACHING NEW LEVELS OF INFLUENCE IN MONTREAL**

After 5 years, HH Montreal is an established local change agent and innovation broker. It is a trusted partner and is being invited to help shape public policies. Like other mature chapters, HHMTL fuels the movement's thought leadership. A broad base of strategic allies, and an exemplary partnership and kinship with financial powerhouse Desjardins since 2015, brought HHMTL to new levels of impact. The Cooperathon illustrates the next generation of collaborative innovation programs and heightened project scale and impact.



#### HEALTHCARE

CHU Ste-Justine, CHUM, McGill University Health Center, Shriners' Hospital for Children, Montreal Neuro, Douglas Mental Health University Institute, Institut Universitaire de Gériatrie de Montréal, Montreal Children's Hospital.

## CORPORATIONS AND INVESTORS

Investors: BDC Capital, RealVentures, Anges Quebec Corporations: Mouvement Desjardins, Desjardins Assurances, Merck, Fasken Martineau, Microsoft, IBM, Gevity, Alythia, Amazon Web Services, Bell, Elekta, Pfizer, Ubisoft, Imagia, AlayaCare, Innovitech, 360MedLink, F & Co, Cossette

#### **ACADEMIA AND RESEARCH**

HEC Montréal, Mosaic, Pôle Santé, Ivado (Institute for Data Valorization), MedTeq Research Consortium, École Polytechnique, McGill University, CRIM (Centre de Recherche Informatique de Montréal), Prompt.

#### **ASSOCIATIONS**

Fondation Jeanne-Sauvé, Fondation De Gaspé-Beaubien, Canadian Cancer Society, Tout le Monde UX, NeuroTech, Wearhacks, Medec, AQIII, RMOQ (Regroupement des Maladies Orphelines du Québec), Canadian Medical Association, Montreal Data.

#### GOVERNMENT

Montreal Trade Commissionner, Government of Canada, Quebec Government, Ministry of Science and Innovation, Montreal, Smart and Digital City, Canada Health Infoway, Public Health Agency of Canada.

#### **TECH HUBS**

Montréal InVivo, TechnoMontreal, Maison Notman, Joule, Hacking Health Accelerator.



#### . 5 Å Hacking Health <**+**> CDMX [à]



Hospital das Clínicas, Hospital Albert Einstein SP

FIPASE - Fundação INstituto Polo Avançado

MOVER - Movimento Empreende Ribeirão,

DevInterior, GruPy, FIPASE - Fundação Instituto

**CORPORATIONS AND INVESTORS** 

Ribeirão Shopping, Philips, iClinic, Done 3D Store.

Pousada Santa Rita, ElixMed, Bonilha & Freitas

da Saúde, Fundação Hemocentro,

Camara de Comercio Brasil-Canada

**ACADEMIA AND RESEARCH** 



#### **HEALTHCARE**

★ IWK Health Centre, Nova Scotia Health Authority **ASSOCIATIONS** 

Sickboy Podcast

**CORPORATIONS AND INVESTORS** 

IBM, Lighthouse Labs

GOVERNMENT

NS Department of Business

#### ACADEMIA AND RESEARCH

Dalhousie University Dept. of Computer Science, Dalhousie University Dept. of Business

**TECH HUBS** 

Volta Lab, Innovacorp, Shiftkey Labs, Densitas

#### **HEAITHCARE**

Windsor Regional Hospital, Hotel-Dieu Grace Healthcare, FastForward Medical Innovation, Leamington District, Memorial Hospital, Henry Ford Healthcare

#### **ASSOCIATIONS**

Mobile Technology Association of Michigan

#### **CORPORATIONS AND INVESTORS**

Mitra Systems, Next Healthcare, Dykema Legal Counsel. Three Leaf Ventures

#### GOVERNMENT

Ontario Centres of Excellence, Detroit Regional Chamber of Commerce, Windsor Essex Economic Corporation

#### **ACADEMIA AND RESEARCH**

University of Windsor Epicentre, Oakland University, Wayne State University

#### **TECH HUBS**

★ WEtech Alliance, TechTown Detroit, Ontario Network of Entrepreneurs. New Economy Initiative. Spark Ann Arbor, Downtown Windsor Business Accelerator, Grand Circus

#### **HEALTHCARE** Hospital La Raza, National Institutes of Health (13)

**ASSOCIATIONS** 

Meshico

#### **CORPORATIONS AND INVESTORS**

IBM, Microsoft, Cognitiva, Kinit, Baver, AXA Investors: Village Capital

#### GOVERNMENT

Local: Ministry of Science & Technology Mexico City, Legislative Assembly Mexico City Federal: National Institute of the Entrepreneur (INADEM), Ministry of Health (CENETEC), Foro Consultivo Científico y Tecnológico (FCCyT)

#### ACADEMIA AND RESEARCH

Private: Iberoamericana, ITAM Public: UNAM, IPN, CINVESTAV, UAM

#### **TECH HUBS**

Canadian Chamber of Commerce

\* Accelerators: Wayrá, Fablab Impact MX, Numa

#### Universidade de São Paulo, Centro universitário

Barão de Mauá, Faculdade de Medicina-USP, Liga Acadêmica de Gestão e Economia em Saúde

#### **TECH HUBS**

**HEALTHCARE** 

★ Hospital São Francisco

**ASSOCIATIONS** 

Polo Avancado da Saúde

Advogados, CIAWARE

**GOVERNMENT** 

SUPERA Parque, Sevna Seeds, APL da Saúde, Polo Industrial de Software

## EXAMPLES OF COMMUNITIES & NETWORKS: EUROPE & ASIA

#### **ANCHORING HH'S VISION AT THE HEART OF EUROPE**

Launched in 2013, Hacking Health Strasbourg holds the biggest annual health hackathon and health data training conference in Europe: Hacking Health Camp. Strong partnerships with pharma and tech industries, as well as ongoing support from regional and local government bodies, helps them create a rich immersive experience for all participants. HH Strasbourg now advises other European chapters, institutions and enterprises on healthcare innovation and technology.



#### HEALTHCARE

Rhéna, HUS, Fondation St Vincent, CHRU Lille, CH de Troyes

#### **ASSOCIATIONS**

LeCISS, URPS Pharmaciens, URPS Libéraux, Alsace Digitale

### CORPORATIONS AND INVESTORS

Sanofi, Medtronic, GE Healthcare, Mylan, Roche, Humanis, Allianz, Servier, SopraSteria, VIDAL, Doctissimo, Eurogroup, Samsung

#### **GOVERNMENT**

Ministère de la Santé, ASIP santé, Europe (FEDER), Région Alsace, Strasbourg Eurométropole, ANAP

#### **ACADEMIA AND RESEARCH**

Université Strasbourg, IRCAD, IHU Strasbourg

#### **TECH HUBS**

Alsace Innovation, Alsace e-Santé, SEMIA, Ekito, TheFamily, InSimo, Icanopée, Dataiku, Saagie, La Javaness, Angels Santé, Alsace BioValley, Medicen, Syntec Numérique, Rhenatic, Attoma, Alsace Business Angels









#### HEALTHCARE

Ospedale Papa Giovanni XXIII, Ospedale Niguarda Ca'Grande Humanitas Research Hospital, IRCCS Eugenio Meda, Ospedale Valduce, Fondazione Don Carlo Gnocchi, Società Italiana di Pneumologia, Società Italiana di allergologia, asma ed immunologia clinica

#### **ASSOCIATIONS**

#### **CORPORATIONS AND INVESTORS**

Attoma Group (license holder) service design, Learning Support Management (consulting), Health Communication Consultant Law firm: carlobruno&associati (communication) Governement: Panakes Partners, Italian Angels for Growth

#### Sponsors: Roche Italia (Platinum)

★ Philips Italia (past, 2015)

#### GOVERNMENT

**Local:** Comune di Milano, Regione Lombardia, Agenza nazionale per i servizi sanitari regionali

#### **ACADEMIA AND RESEARCH**

Università di Milano-Bicocca; Politecnico di Milano; CNR-ITIA Istituto di Tecnologie Industriali e Automazione, Fondazione Filarete

#### **TECH HUBS**

Tech: Cluster Lombardo Scienze della Vita, WeMake Fablab Makerspace Accelerators: Polihub, BioUpper, InnovitsLab, CODEMOTION

#### HEALTHCARE

Pantai Hospital, Seremban Hospital (Hospital Tuanku Jaafar), University Malaya Medical Centre

ASSOCIATIONS

Digital Health Asia

#### **CORPORATIONS AND INVESTORS**

Mediconsult, International Medical University (IMU) GOVERNMENT

#### **ACADEMIA AND RESEARCH**

International Medical University (IMU), University Malaya

#### **TECH HUBS**

MaGIC (Malaysian Global Innovation & Creativity Centre)

#### HEALTHCARE

IHE International, FHIR, HL7, Hospital IP Group **ASSOCIATIONS** 

Health Informatics Society of Australia

#### **CORPORATIONS AND INVESTORS**

★ Amazon Web Services CSC, BioMelbourne Network, DiUS, Periop partners, Davies, Collison, Cave (IP)

#### GOVERNMENT

Victoria State Government, Canadian Consulate in Melbourne

#### ACADEMIA AND RESEARCH

The Australian eHealth Research Centre, University of Melbourne, Carlton Connect Initiative

#### TECH HUBS

LaunchVic, Wade Institute, Seed

#### HEALTHCARE

CHU Bordeaux, ARS: Agences régionales de Santé Nouvelle Aquitaine, Fedération hospitalière de France, Association des internes des hôpitaux de Bordeaux

#### ASSOCIATIONS

Aquinum

#### **CORPORATIONS AND INVESTORS**

Interaction Healthcare, Maincare Solutions, Lilly, Cap Gemini, Sanofi, Medtronic, Pépite SC, Conserto, YUME

#### GOVERNMENT

#### ★ Ville de Bordeaux, Bordeaux Métropole, Région Aquitaine

#### **ACADEMIA AND RESEARCH**

Université de Bordeaux, EPSI, Epitech, École de la communication et création digitale, Labeli, Ecole national supérieure de cognitique

#### **TECH HUBS**

TIC Santé Cluster, French Tech, TSA eSanté Consulting, ECA, Les Bordelais, Invivox DISSEMINATING KNOWLEDGE AND KNOW-HOW: HIGHLIGHTS OF KEY 2015/2016 THEMES CAFÉS. CONFERENCES. WORKSHOPS.

Creativity is fed by knowledge and insights. HH cafés are gatherings for the community to connect and learn. Technology experts learn about healthcare's challenges and opportunities. Clinicians learn about the realm of possibilities brought to life by technology. Startups showcase bold ventures and visions of the future. A total of 45 cafés were held across the world in 2015 and this was increased to 94 cafés in 2016 thanks to the exponential growth of HH chapters. Here are some highlights from these events.

#### **E-PHARMACY**

#### Nov 8<sup>th</sup>, 2016 HH Strasbourg

How can pharmacies improve patient management with digital tools? What will tomorrow's pharmacy look like?



#### GERIATRICS CLINIC

#### March 19<sup>th</sup>, 2016 HH Kuala Lumpur

How can healthcare and technology work together to improve together?



#### **NEUROSCIENCES**

#### June 28<sup>th</sup>, 2016 HH Montreal

How are advancements in neurotechnology going to change how we understand and work with memory?



#### **BIOHACKING**

#### March 12<sup>th</sup>, 2016 HH Berlin

A hands-on workshop where the participants learned what it was to be a gene scientist for a day.



#### CANCER & BIG DATA

#### February 2<sup>nd</sup>, 2016 HH Strasbourg

What is hidden behind the two words "Health Data"? We learned from a lawyer specializing in healtcare.



#### CANADA/US HEALTH IT SUMMIT

#### April 28<sup>th</sup>, 2016 HH Windsor/Detroit

An opportunity to forge greater regional and cross-border collaboration in healthcare.



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#### HEALTH INNOVATION CAFES

#### Sept 7-21, Oct 5, 2016 HH Quebec

A series of cafes in preparation for the HH Quebec hackathon, to meet collaborators and exchange on future projects.

#### HEALTH STARTUPS

June 1<sup>st</sup>, 2016 HH Ribeirão Preto

3 startups tackling healthcare challenges were invited to present their work.





#### **UX DESIGN**

#### May 11<sup>th</sup>, 2016 HH Vancouver

Design Challenge participants were invited to learn how to turn ideas into successful ventures.



#### MEDICAL USAGE OF CANNABIS

#### April 5<sup>th</sup>, 2016 HH NYC

Information for the community on the evolving and growing field of Cannabis therapeutics.

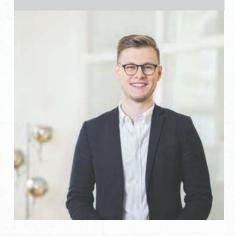


<+> HACKING HEALTH

#### REFUGEE HEALTH

#### September 30<sup>th</sup>, 2015 HH Berlin

In light of the refugee crisis, the Berlin chapter wanted to generate a discussion on this important topic.



#### **TELEMEDICINE**

January 14<sup>th</sup>, 2016 HH Mexico City

Inspiring conferences on today's and tomorrow's innovation in health in Mexico.



#### COGNITIVE COMPUTERING & AGING WELL

#### February 10<sup>th</sup>, 2016 HH Edmonton

In view of the hackathon, the community was invited to learn more about IBM Watson and Bluemix.



#### IDEAS FOR APPS

#### September 24<sup>th</sup>, 2015 HH Ottawa

A description of the app development process and exchanges on ideas for apps.





# CREATING WAYS TO TURN IDEAS INTO REAL PRODUCTS AND BUSINESSES

## BUILDING, FUNDING, ACCELERATING **STARTUPS IN CANADA**

# ACCELERATOR >>

#### HACKING HEALTH TRIGGERS INSIGHTFUL PRODUCT IDEAS FROM FRONTLINE HEALTHCARE INNOVATORS, AND ATTRACTS DRIVEN STARTUPS.

The Hacking Health Accelerator is a catalyst that can turn these innovators into entrepreneurs, ideas into businesses that can bring the best new products to the world.

In the fall of 2015, Hacking Health rallied leading venture capital investors, angels and partners to launch the Hacking Health Accelerator. This unique

organization focuses on the creation, growth and seed funding of promising new startups. It also provides intensive mentorship, support and access to key partners to accelerate their path to commercialization. It aims to drive startup creation across Canada and transform healthcare globally.

The Accelerator also created the Bootcamp, an intensive training and support program, soon to be available to all chapters. This will foster entrepreneurship and bring the well-known Lean Startup approach to healthcare communities worldwide.

## THE HH ACCELERATOR STARTUPS ARE **PIONEERS IN THEIR FIELDS**



A 2012 project from HH Toronto now taking the market by storm. Swift Medical delivers a mobile wound care management platform. Its AI-based technology enables precise, consistent measurement, instant documentation and wound progression images with a smartphone.



Emerging from in HH Montreal's 2015 Challenge, Doctr simplifies and optimizes access to care through big data analysis, publishing emergency room occupancy rates, brokering last-minute appointments, helping patients navigate specialist care. #1 Healthcare App on Apple App-Store and Google Play.

## imagia

Co-founded by a Hacking Health volunteer, Imagia deploys cutting edge deep learning technologies to provide superhuman performance to cancer diagnostics. They're bringing the University of Montreal's AI research to market, and are positioned to become a game changer in medical image analysis.



Launched as a Hacking Health project at CHUM, Reacts is a unique online software solution that allows healthcare teams to remotely interact, supervise, work, teach, and collaborate. By introducing the concept of hyperpresence to the world, the startup aims to redefine remote intervention, education and communication in healthcare.

### SCRIBENS LAB

Emerging from U de M's École Polytechnique, Scribens will commercialize a novel technology that detects neurodegenerative diseases such as Alzheimer's and Parkinson's, and develop mental disorders such as attention deficit. It opens the door to new possibilities for caregivers.



As a strong Hacking Health advocate & Cooperathon exhibitor, Dialogue delivers a virtual care platform for businesses. Its new app gives access to a full care team via an accessible mobile platform - all available for video consultations, diagnosis, prescription, follow ups & preventive care. Currently targeting employers, it is on the path to making virtual care a reality across the nation.

## PROVIDING INNOVATION PROGRAMS TO ENTERPRISES AND INSTITUTIONS

## HEALTH FACTORY go beyond ideas

Businesses and their partners want to engage in their own internal innovation process that extends far beyond Hacking Health events. Health Factory was launched to meet these needs and deliver a broad set of services to support innovation in institutions and businesses in France.

## SAVVY CONSULTING EXPERTISE IN HEALTHCARE INNOVATION



#### **IMMERSIVE EXPERIENCES**

Events and learning expeditions to immerse healthcare stakeholders in digital culture and help digital experts to better understand healthcare needs.



#### **HEALTH & DIGITAL EXPERTISE**

Services for deploying projects with innovative technologies with the support of the best experts and consultants in software development, hardware, law, healthcare, and design.



#### **EXPERIMENTATION**

Physical platforms (hospital unit, pharmacy, physician practices, home care...) and digital platforms (API, services, datasets ...) for field testing and measuring healthcare stakeholder feedback on innovations. section

# TAKING ACTION AROUND THE WORLD

## FROM TALKING TO ACTING **HACKING HEALTH @ HIC**

The Health Informatic Society of Australia, HISA and its leaders share a common passion for health reform enabled by health informatics and digital health. They continuously look for new ways to shape a bright future for their country, and to play a leadership role nationwide. Their visionary CEO, Dr. Louise Schaper and her team, are literally on a mission to fix healthcare.



Philip Dalidakis, Victoria's Minister for Small Business, Innovation & Trade, share the Hacking Health passion with the fellow HH@ HIC16 participants

HISA made Hacking Health part of their mission, working together to make their effort resonate around the world, truly building a global movement. It made Hacking Health a key part of its annual national Health Informatics Conference (HIC), rejuvenating this major event with a new level of energy, enabling its community to take concrete action to make a difference for

healthcare in Australia... and plant the seed for some fascinating new ventures. "The uniqueness of Hacking Health is that it's all about connecting innovators with the people who have been doing health for decades. It's high energy. It's messy... but remarkable."

"The good stuff that happens when you show up"

hic

Dr. Louise Schaper, **CEO, HISA** 



## INSPIRE. LEARN. ACT. ACROSS EUROPE HACKING HEALTH CAMP

A 4 day international event and the largest European healthcare hackathon, Hacking Health Camp aims to inspire participants with world-class speakers, train them with 30 sessions, and give them a chance to act right away.



Each event day is designed to inspire health professionals, designers, hackers, makers and entrepreneurs, with the event culminating in the hackathon to allow them to collaborate. It's an event for anyone interested in health innovation as it rallies health and tech professionals around their common interests, helping them discover amazing possibilities for tomorrow's health.

Hacking Health Camp attracts some of the most brilliant minds who share their views on the future of healthcare, teach everything there is to know about health data, pitch great startups, and build new solutions onsite, in 54 hours.



"We all regret we were not in Steve Jobs' garage in the 80's, but in 30 years, you will be able to say that you were here in Strasbourg, today..."

Uwe Diegel, iHealth President



## ENGAGE PHYSICIANS NATIONWIDE JOULE HH DAYS



The Canadian Medical Association (CMA) and its new division Joule launched a whole new strategy to spearhead and drive physician-led innovation for their 85,000 members. They partnered with Hacking Health to bring a heightened level of creativity and community involvement in the process, and to create new ways to better achieve their respective missions together.



physician-led innovation.

The Joule H2 - Hacking Health Design Days offer CMA physician members a unique experience to collaborate and crystallize ideas for solving the challenges they face. "They drive physician-led innovation by giving CMA members a safe and energetic platform to explore their diverse ideas to make healthcare better, using a robust design methodology that greatly streamlines the delivery of saleable solutions.", explains Zayna Khayat, Senior Advisor, Health System Innovation at MaRS Discovery District



Lindee David, CEO of Joule, a CMA Company





## WORKING WITH NATIONAL HEALTH IT SOCIETIES **eHEALTH 2015 TORONTO** + eHEALTH 2016 VANCOUVER



Hacking Health partnered with eHealth, Canada Health Infoway, COACH, the Canadian Institute of Health Informatics, national sponsor Desjardins Insurance and local sponsor Gevity to deliver a high impact design challenge.



Hacking Health is doing

the country. We thought: Let's join forces and go further together!

Glenn Lanteigne, **Board Director. COACH: Canada's** Health Informatics Association



WEEKS

Launched at the Center for Digital Media in Vancouver in 2016, and at the OTN day in Toronto in 2015, the Design Challenge culminated in the national eHealth conference. The competing teams showcased impressive projects and injected a massive dose of youth, energy and innovation in the conference

program. The 8 week format allowed them to develop momentum and partnerships hardly possible in a traditional hackathon. Some, like iUGO Health, even went on to become highly successful digital health startups.

## REGIONAL ECONOMIC DIVERSIFICATION **HH WINDSOR-DETROIT**

Two cities. Two countries. One powerful and innovative Hacking Health program. Windsor and Detroit were already pushing the notion of collaboration to a higher level with the first ever cross-border Hacking Health Hackathon and Café series. They now do this with a higher purpose in mind.



Yvonne Pilon – President and CEO of WEtech Alliance explains: "We are a region that historically has been defined by the auto industry, which has established this thick network of cross-border relationships between companies, research institutions, organizations and people. There is so much talent crossing the border in the auto industry. We saw the same potential in the healthcare and tech sector – and the potential to unleash a burst of innovation by bringing creative minds together across these two fields and at the same time by building a cross-border community over the divide. Hacking Health was the bridge." WEtech Alliance, the University of Windsor's EPICentre and TechTown Detroit united to make this happen. And they are not stopping there. Fostering the creation of new startups to diversify their local economy, they are now literally putting together the foundation of a Windsor-Detroit cross-border MedTech Cluster.



By organizing Hacking Health we're not just trying to improve patient-centric healthcare, we're really trying to spark economic development.

Irek Kusmierczyk, Director of Partnerships at WEtech Alliance and Windsor City Councillor in the Windsor Star, March 17<sup>th</sup>, 2015





## LAUNCHING A NATIONAL HEALTH-TECH CLUSTER SWISS DIGITAL HEALTH®

Based on a background of initiating digital health projects and mobilizing regional hospitals in Valais with Hacking Health, the Ark Foundation has launched a major health-tech cluster initiative: Swiss Digital Health®.





Swiss Digital Health® aims to initiate and empower ambitious projects to improve global healthcare systems - with reputable Swiss solutions. The initiative begins by detecting unmet and emerging needs. The intended outcome? The successful market launch of new solutions, The initiative intends to breathe innovation into each stage of the health value chain.

Through targeted Hacking Health events, innovation challenges, design workshops, special trainings, hackathons or acceleration programs, Swiss Digital Health® is backing abilities and nurturing opportunities. With Hacking Health being an integral part of the cluster, it fosters international collaborations and helps to expand the digital health business and innovation network.



Hacking Health helps us be part of a dynamic ecosystem integrating local, national and international stakeholders and to initiate ambitious projects.

Sebastien Mabillard, leader, Swiss Digital Health

₽ **25000** 1<sup>ST</sup> PRIZE



## COLLABORATION AND DESIGN THINKING TO INNOVATE HEALTHCARE NATIONWIDE

In May 2015 Hacking Health Milano hosted Italy's first-ever health hackathon. Since then, it has ramped up to mobilize the whole nation using design thinking to re-invent health services.



HH Milano shared the process and its outcome with the public.

HH Milano established a national network of engaged hospitals

18 months later, for their second annual event, Hacking Health Milano succeeded in engaging not one, but an amazing 11 hospitals and national healthcare systems in their process. This year HH Milano decided to focus on design thinking and engage participants in a much longer challenge.

By setting up a 9-month long collaboration with leading university Milano-Bicocca, HH Milano allowed over 100 students from diverse backgrounds to gain insights into patient journeys and staff challenges.

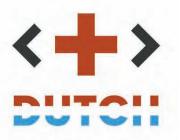


to scout for new ideas and assess their value. We're part of a network of 29 hospitals which share innovative ideas...

> Dr. Raffaele Benaglio Innovation Officer, Home Care, Milano Don Gnocchi Hospital



## DUTCH HACKING HEALTH **TAKES THE WHOLE NATION BY STORM**



One nation united to innovate healthcare



This is a nationwide event where people of different backgrounds come together to create new solutions for healthcare. Join Dutch Hacking Health!" Edith Schippers, Dutch Minister of Health, Welfare & Sport

Erik Gerritsen, Secretary-General, The Netherlands Ministry of Health, Welfare and Sport, with teams.

In 2015, the REshape Center for Innovation of Radbound University Medical Center was contemplating a hackathon to shake up their institution. Instead of going it alone in their local community, they chose to join forces with Hacking Health and play a leading role on a global scale. In 2016, with a bold vision to mobilize their whole nation around healthcare innovation, four Dutch University Medical Centers, - Leiden UMC, Maastricht UMC+, UMC Groningen and Radboud UMC -, took their country by storm and created Dutch Hacking Health. For the first time ever, a 'health hackathon' was held in a nation-wide setting in multiple cities.

Not only is Dutch Hacking Health an enlightening example of collaboration and leadership on a broad national level, it fueled a nation's efforts to improve healthcare. The University Medical Centers made the Hacking Health events an official part of their innovation agenda. The chief judge on a national level was the Secretary-General of the Ministry of Health, Erik Gerritsen himself. The Dutch Minister of Health, Welfare and Sport, Edith Schippers, called on all citizens to participate and take the opportunity to change the way care is delivered in The Netherlands.



Dutch HH is an initiative of four University Medical Centers: LUMC in Leiden, Maastricht UMC, UMC Groningen and Radboud University Nijmegen Medical Centre. It is a real "creative pressure cooker for health!" Affordable, good quality care is the most important thing for future generations. Innovation is key. I'm Erik Gerritsen and I'm Hacking Health. Are you?

Erik Gerritsen, Secretary-General





## HACKING HEALTH rad**≇o**

Hacking Health leaders from around the world continuously innovate and improve the movement's approaches with their own unique contribution. Dutch Hacking Health took this to heart and launched Hacking Health Radio. It kept the whole country humming, and sometimes dancing, together in The Netherlands. It could soon provide soundbites and soundtracks of creativity for the whole movement!

## DEEPENING QUALITY, MOMENTUM AND PARTNERSHIPS COOPERATHON



Desjardins Lab and Hacking Health teamed up to develop a unique program focused on social impact, providing teams with more time and support to improve project quality and enable the creation of useful partnerships and collaborations.



Senior dignitaries saluted and supported the participants: Dominique Anglade, Minister of Economy, Science and Innovation, Minister responsible for Digital Strategy, Rita Lc De Santis, Minister responsible for Access to Information and the Reform of Democratic Institutions, Chadi Habib, Executive Vice-President of Information Technology, Dr. Fabrice Brunet, CEO CHUSJ and CHUM, and many others.

Kicked off in Montreal's University Health Center's agora, the Cooperathon culminated in a grand finale in the province's largest interior open public mall.

The Coopérathon is the new generation of hackathons, running over 4 weeks to foster quality solutions driven by partnerships and supported by the community it seeks to serve. The event is the result of a collaboration between Desjardins Lab and HACKING HEALTH and focuses on health, connected communities, and fintech. It involved over 330 participants and collaborateurs, 500 attendants and 50 community partners. Partners included forward thinking institutions such as teaching hospitals CHU Sainte-Justine and CHUM Montreal, along with Montreal's urban incubator Innocité.

From the 96 pitches which were brought forward by the community at the initial kick off in October, over 40 projects emerged. After 672 hours of collaboration, a selection of teams were shortlisted to push their work further and pitch their projects at the final Demo Day. Prizes were awarded by several event partners. University Health Centers are implementing complete in-house innovation programs as next steps to the Cooperathon, extending its impact on a permanent year long basis."











It is the value of cooperation, of inclusion. of social impact that we wanted to embed in a new program.

Federico Puebla **Director Innovation at Desiardins** and Head of Desjardins Lab





96 IDEAS

## WINNERS INCLUDE:

#### @Coeur

Optimizing the monitoring of heart failure patients;

## ALLOS, mon avatar allergique

Accompanying on a daily basis kids with food allergies during their desensitization and connecting in real-time with the medical team

3SC Suivi Sécuritaire en Service Clinique Visual table of hospital beds

## ChatMeds

Personal assistant that instantly answers your questions about drugs

#### Pour mieux guérir, mon coeur

Improving the positioning of babies in the pediatric intensive care unit

## Anedda

Innovative collaboration platform for therapists: self-employed workers in the health field

## Chain of life

Accelerating clinical trials to save more lives faster.

SECTION SECTION

# SUCCESS STORIES

Hacking Health helps to make regions, healthcare systems, and companies more innovative and better at improving population health. While not simply a measure of success, it is always fascinating to see the number of new digital health products and services that start at Hacking Health events. Here are some of our success stories.



## CareKit: IUGO HEALTH

CareKit was created during the 2015 eHealth conference in **Toronto** for the Hacking Health Design Challenge.

This comprehensive software and hardware solution enables monitoring and management in real time of at home patients with the use of wearables and sensors. Eight months later, **ReliqHealth** acquired CareKit (rebranded **iUGO Health**) for \$2 million in shares and performance warrants. iUGO Health is currently collaborating with a 500+ bed US hospital to develop a hospital tailored solution.



## **EyeWare**

Born in 2015 at Arkathon, our Swiss Hacking Health event, EyeWare provides eye gaze tracking technology applied to healthcare - besides winning first place it also won the Liechti Foundation award. Eyeware's first product, Eyeware-Assist, allows people with limited body mobility to control a standard computer at a lower cost and higher flexibility than alternatives. After joining Swiss Digital Health's acceleration program, the project was integrated in a partnering clinic specialized in physical rehabilitation and tested with over 20 quadriplegic patients. EyeWare is finalizing the launch of its **first commercial product**, which is scheduled to hit the French and German markets by the end of the year.





## **TrueVation - Patient Prep**

Born in Saskatoon in 2014, Patient Prep is an app to facilitate appointment efficiency by getting patients to pick from a list of symptoms, then answer a series of questions before a doctor's appointment. The team won \$50,000 in support from the University of Saskatchewan and first place in the Wilson Centre's i3 Challenge. In total, they won \$60,000 and office space for a year at Innovation Place Tech Venture Challenge. In 2016, Canada's second largest Electronic Medical Record provider acquire Canadian rights to PatientPrep.

## **MedPics**

MedPics is a secure photo sharing application and database to assist healthcare professionals seeking second opinion or tutorials. Born at **Hacking Health Camp's** first event in 2014, the application is now available on both iOS and Android. With 21,000+ subscribers, it recently secured 300,000€ in seed money and is incubated in Paris by *The Family*. MedPics was also identified by trade publications as one of the top French digital health startups to watch in 2017!

## Other success stories



#### Magenta

A clinic management tool increasing examination room utilization rates, providing patients with smooth online booking, eliminating wait time (and waiting rooms altogether!) and reducing operating costs. A win-win-win solution for the clinics of the future.



#### CarePRN

RN nurse in training and home care provider Jason Wolfe-Greer pitched Care PRN, which won "Best Student Team from the US" award at Windsor-Detroit's first hackathon. This digital marketplace is set to release in 2017 and will make it easier for families find a trusted home caregiver while supporting homecare givers in finding reliable work and reducing administrative expenses.



## **ELMO**

Elmo allows parents to sample children's language in their day to day life for speach and language therapists to improve the precision of their assessment, the quality of treatment and the number of patients they can care of.



## **EZ Referral**

ezReferral allows for immediate, timely responses and notifications to all of the important people. With a few simple clicks, offices and specialists are contacted and requests for appointments are made.



## My Baby And Me

An app for pregnant women in vulnerable situations that helps increase the delivery rate of healthy full term babies. The team is having amazing impact in Ontario. A clinical study demonstrated an actual decrease in deliveries with complications among the population utilizing the MyBabyAndMe App.



#### lamSick

A digital health platform that is transforming how patients navigate & access healthcare in Canada. Through the iamsick.ca website and free smartphone apps, patients can easily find nearby healthcare options, book appointments online, see wait-times for same-day visits and enter virtual waiting rooms instead of physical waiting rooms.



#### CareCrew

CareCrew is a web-based mobile app developed for families to help support seniors aging at home, connecting families and friends, with health care professionals and home support providers to provide personalized care. CareCrew completed the Lean Launchpad program of e@UBC in Vancouver and is making great progress in connecting care teams in British Columbia.



## **HALEO**

HALEO Preventive Health Solutions helps organizations increase the productivity of employees suffering from sleep disorders. It is currently being piloted with 2000 employees at Desjardins Insurance. HALEO and its partners support employees throughout the care pathway, including screening, diagnosing and treating for insomnia and obstructive sleep apnea.

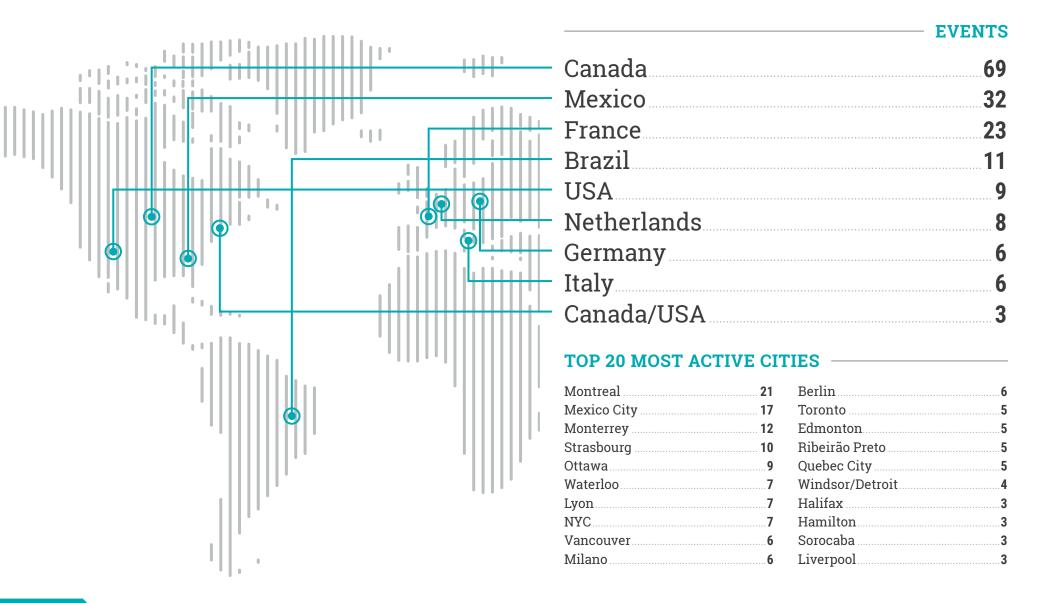


## HACKING HEALTH IN NUMBERS

## 2016 events

<b>161</b> events						
221 <sup>%</sup> increase since 2015	HACKING HEALTH TODAY					
	1306	650+	<b>180</b> +			
<b>28</b> hackathons	ideas	projects	leaders			
<b>94</b>   cafés	<b>560</b> +	<b>45</b>	55			
<b>39</b>   clinics	volunteers	active chapters	host cities			
	BUSIEST MONTHS					
6 conferences	16 <sup>%</sup>	DCTOBER         12%           VEMBER         11%	MAY APRIL			

## **BUSIEST COUNTRIES**



## PARTICIPANT PROFILE



## DIGITAL PRESENCE WEBSITE

# Website monthly average

monthly page visits

unique visitors, monthly

20,840

23,000

13.950

visitors, total, monthly

465 average unique visitors, daily

average returning (incl. unique) visitors, daily

9.970 visitors August (low season)

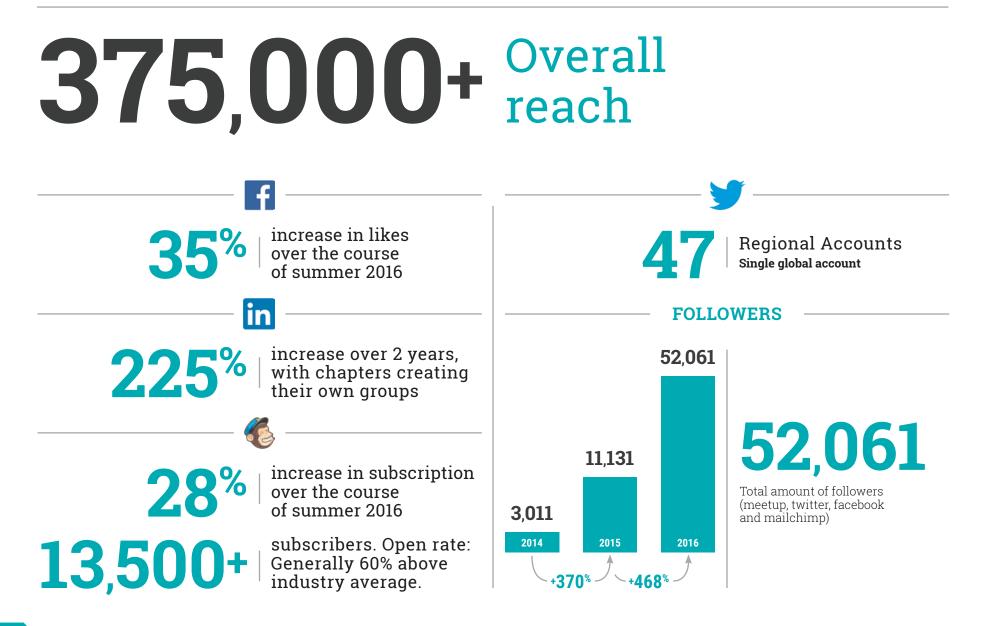
> visitors November (high season)

return visitors

27,100

270% increase in visits during biggest hackathons

## DIGITAL PRESENCE SOCIAL MEDIA



## MEDIA MENTIONS

# 241 articles

"Hacking Health: Children's Hospital of Eastern Ontario, CHEO, links doctors with techies in search of innovation"

#### Ottawa Citizen, November 2016

"Cooperation 2016: Cooperation, innovation and creation for all"

#### Morningstar, September 2016

"The biggest hackathon in the Netherlands"

#### Founded in Groningen, May 2016

"Innovation condensed: When great minds meet..." Gestion HEC Montréal, March 2016

"The future of health takes shape at Hacking Health Camp" France Info, March 2016 "Aims to build amazing solutions with better information for better health."

#### Don Newsham, April 2016

"SALUS Group raises health challenges for hacker marathon in Londrina, part of one of the country's largest technology events"

Bonde, September 2016

"Hacking Health Hamilton tech startup gets \$2-million boost"

The Hamilton Spectator, February 2016

"Hacking Health drives healthcare into 21<sup>st</sup> century with new accelerator"

The Gazette, October 2015

"Hacking Health: 30 challenges for healthcare"

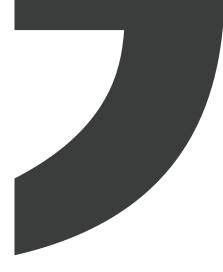
Le Progrès, November 2016

"We help startups find their market"

Usine Nouvelle, April 2016

## It's about time the digital revolution also happens in healthcare

<mark>Le Figaro,</mark> May 2015



"Hacking Health Milano, or how to innovate in the healthcare sector"

Attoma, October 2015

## Award winning apps... at a high-energy contest

Canadian Healthcare Technology, June 2016

## MEDIA MENTIONS

"Health hackathon in Kitchener to tackle problems faced by aging population" CBC News, November 2016

## Hacking Health: Bottom Up Innovation for Healthcare

Technology Innovation Management Review, July 2016 "Hackathon, meetup, observatories... startups are at the heart of digital transformation"

#### Usine Digitale, July 2016

"Customers will best engage with a brand that shows a sense of purpose."

#### Hong Kong Marketing, March 2015

"We came to put patient associations at the center of innovation, Gilles Litman" Usine Nouvelle, April 2016

"800 people came from Germany, Belgium, Switzerland, the Netherlands, Iran and France. It's the largest Hacking Health event ever realized. Giants like Samsung, Sanofi, Medtronic and GE Healthcare are partners."

CRIP, May 2016

## "Cyber-health meet in Valais"

ICT Journal, May 2015

"Seeking to improve the healthcare system in Mexico with innovation and technology" Milenio emprendedores, November 2016



Hacking Health... makes life easier for patients and saves time and money for doctors.

Windsor Star, March 2016

## THANK YOU TO VISIONARY SPONSORS WHO MAKE IT ALL POSSIBLE

NATIONAL SPONSORS



THE NETHERLANDS	NEWFOUNDLAND	HALIFAX	KUALA LUMPUR	MELBOURNE
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	VALAIS	VANCOUVER	WATERLOO	RIBEIRÃO PRETO
	SWISS DIGITAL HEALTH	Jdre 5 - 8. 2015 VARCOUVER. 00	Canadian Centre Managing & Brain Health Innovation	São francisco
		Desjardins Insurance	GEVITY accelerator centre Centre	

## **GLOBAL COORDINATION TEAM**



Luc Sirois

HH co-founder and Executive Director



Hadi Salah

HH co-founder and HH Toronto chapter leader



## **Annie Lamontagne**

Head of Chapter Relations and International Development



## Isabelle Lusseyran

Head of Development



## Julia Delrieu

Head of Communication & Digital Tools



## **Stephanie Pataracchia**

Program Manager and HH Montreal chapter leader

## **BASIC FINANCIAL REPORT**

## Source of revenues for HH Core



Sources of revenues for HH Core - Countries



## + HACKING HEALTH

## BRINGING INNOVATION TO HEALTHCARE

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