Hamilton Health Innovation Check-up: Meeting Minutes

May 2021

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STANDING AGENDA TOPICS:

- **Guest Speaker Discussion**: insights around the experience and expertise of an invited speaker, focusing on a subject that may be of interest to the broader community

- **Communicate**: share recent successes, upcoming events, innovation pipeline and new products, health innovation trends, etc.

- **Collaborate & Accelerate**: welcome new members to community, partnership opportunities, discover programming and resources available to the community, discuss market gaps and challenges, learn about potential funding opportunities, new RFPs issued, etc.

Facilitator & Note Taker	Alex Muggah, Director, Synapse Consortium
Virtual Location	Join Zoom Meeting: https://zoom.us/j/405351918
	Dial in: +1-647-558-0588,,405351918#
	Register here:
	https://us02web.zoom.us/meeting/register/uZQodOyppzoiQnRwfvVuEJtEMUpKPUZPzg

Next Monthly Check-up: June 28th 9:00 – 10:00am | McMaster Innovation Park (via Zoom)
Please sign up to our mailing list to receive meeting minutes and other important updates.

Finding collaborative partners for health companies and researchers can be difficult. Synapse has created the Hamilton Health Ecosystem Directory and the Health Innovation Partnership Portal (HIPP) to facilitate finding new partners within Canada's leading health research and educational ecosystem located in in Hamilton, Ontario.

As a result of the COVID-19, all in-person conferences and meetings have been cancelled. We are trying to track down events that will be held virtually and will try to keep our calendar up to date.

If you have an event that you would like listed here, please contact us at: info@synapseconsortium.com

Hamilton Health Innovation: Calendar Highlights

Check out Synapse's online calendar

June

- Jun 2 & 9: Canada's Regulatory Medtech Conference 2021 (MedTech Canada)
- Jun 8: How Canadian and U.S. investors Are Supporting New Builders: The Next Generation of Entrepreneurs (CENE & EY)
- Jun 8-11: Redefining Early-Stage Investment Service Provider Showcase (RESI)
- Jun 9: Five examples of how data enables healthcare transformation (Digital Health Canada)
- Jun 9: Healthcare Outlook 2021 (Economic Club of Canada)
- Jun 10-18: BIO Digital 2021 w/ Ontario Gov't Delegation (Biotechnology Innovation Organization)
- Jun 17: Life Sciences Ontario Member Marathon (LSO)
- Jun 15-16: Canada's MedTech Conference 2021 (Medtech Canada)
- Jun 22-23: MaRS Impact Health (MaRS)
- Jun 22: Growing a Cannabis Economy - Lessons from Hamilton, ON (Buffalo Niagara Partnership)
- Jun 22: Unlocking Your Talent Acquisition Potential (LSO)
- Jun 22-23: HardTech Pitch Competition (VentureLab)
- Jun 28: Hamilton Health Check-up (Synapse Consortium)

July and Beyond

- Jul 6: Venture Summit \ Virtual Connect Global (CENE)
- Jul 26: Hamilton Health Check-up (Synapse Consortium)
- Sept 2021: Health Venture 1 (MGD Health Innovation, Commercialization & Entrepreneurship)
- Oct 13-14: FHIR North Conference (Mohawk College)
- Oct 14: LSO Celebration of Success – Annual Awards Presentation (LSO)

Time allotted | *30 Minutes*

Topic: **Guest Speaker Discussion**

Insights around the experience and expertise of an invited speaker, focusing on a subject that may be of interest to the broader community

Guest Speaker Discussion
Guest Speaker(s): • Simon Woodside Co-Founder and Chief Technology Officer, Medstack [presentation slides used, and are available for download from the Health Check-up website]
Discussion *[the following is a synopsis of the discussion, and has been lightly edited for length and clarity]* Introduction It's been a few years since I've last presented, and a lot has changed. But what an incredible group of people that is here today – some friends, people I know. I'm going to talk about MedStack and our journey as a startup, and as a company that serves digital health innovation in Ontario and across Canada. I'll start with a little bit of my own background – briefly – I have Computer Science (CS) degree from the University of Waterloo, and I worked at Apple for a few years in California in the core operating group. I then got the entrepreneurship bug (this is my third startup). I came up the idea for MedStack after my 2nd startup, where I had been doing a lot of digital health apps (front-end, back-end, mobile). There is a huge challenge to doing privacy and security compliance for digital health apps. And a lot of the work is the same for everyone. MedStack offers a turnkey security and privacy compliance solution that fast tracks the path-to-scale for digital health companies which speeds companies way up on their path to getting to scale. Our tagline is we provide "software-driven guaranteed data security for digital health". Quick History of MedStack We started in 2015, and now in 2021 we are starting to get a nice hockey-stick graph in terms of sales (SaaS MRR). We've done a lot of different things in the last 6 years, including participating in several accelerators including DREAMIT (Philadelphia), Creative Destructive Lab (Toronot), and 500 Startups (Palo Alto). We did the angel round while at Creative Destructive. We did a series seed in 2019 with ScaleUP and Telus Ventures. We've never been more than 16 employees, which means that the SOC 2 Certification that we were able to secure in 2020 was quite impressive at our scale. We also been fortunate to have a lot of great partnerships and win some awards (e.g., CATAlliance, CIX Top 20, etc.). We had linear growth until 2019, and then more interesting growth in 2021. We had a legacy product – which we called MedStack Classic. Using our series seed, we were able to build out a new replacement platform, which we've called MedStack Control. As of 2021, we've now completely phased out MesStack Classic – it's like we've started as a new startup with a new platform, the growth has been pretty spectacular. We've also developed, are starting to sell, an enterprise version of our solution. As the CTO, I'm particularly proud of our accomplishments, as I helped to build out these platforms We have 85 customers now – which span about 60-40 Canada/US. In terms of sub-sectors, we serve companies working on telemedicine, smart medical devices (those that have an app component), remote monitoring tools, care coordination, AI-driven research and patient workflows inside clinics and hospitals, to mention just a few.

Guest Speaker Discussion

There are three companies that are in Hamilton (or have staff in Hamilton) that we support, including Lumedi, Cyno, and GoGetFit

Our business model is a Tiered SaaS offering around privacy and compliance. We're running on a cloud infrastructure which we pass through to the customer. We're also close to another fundraising round, which I can't share too many details on. Thus far, we've raised $2.5M, with support from Telus, ScaleUP, Blu Venture, Panache, OCI, BCF, 500 Startup and DREAMIT.

<u>Understanding Context of the Sector – Growing Complexity, Costs and Data</u>

Would like to pivot from the history of MedStack to the context in which it operates.

MedStack has always planned on being focused on serving the US market (and other parts of the world), and as it stands is roughly half of our market. As we begin to saturate the Canadian market, we are starting to see the share of the US market grow significantly.

The share of GDP that the US spends on healthcare is staggering (currently around 17%), we're seeing that level increase further (and expect it to break 20% by 2028). While we are better off in Canada, we're still the second highest of all countries with publicly-funded health systems (at 11.6% of GDP, up 4.2% this year) and facing a host of challenges (e.g., national wait times growing by 2.5x between 1993 and 2020). The treatment of chronic conditions is characterized by long-term patient engagement, complex comorbidities and coordination needed across care teams. We believe that a key solution to containing the cost explosion is the adoption of digital health.

When I talk about digital health, I am talking about is software, that usually isn't' running on an Electronic Health Record system – they are separate discrete apps. For example, digital health solutions can handle issues around outpatient care, when patients aren't tethered to an EHR. Chronic conditions drive 75% of healthcare spending and add pressure to capacity with long-term patient engagement, while many diagnostic errors and unnecessary test are traced back to a lack of data. To date, EHRs have had a major impact, however they can not by themselves alone improved the quality of patient care and contain costs.

We're seeing an enormous explosion of data being used by the healthcare system (up 1400% since 2013 to 2,314 exabytes). As a result, we anticipate there being a $1.3T market in digital health by 2025 (United States). This is supported by an increase in venture deals in digital health apps, with 440 venture deals worth $14b in 2020 (up almost 50%).

<u>The Privacy & Security Challenge Companies Face</u>

You've all heard of HIPA (the US laws that governs data security and privacy), and we also have PHIPA (dealing with Ontario) and lots of other laws and frameworks in other jurisdictions around the world (ISO 27001, GDPR for Europe, PIPEDA in Canada, NIST in US, HiTrust, SOC-2, etc.) Some of them go beyond healthcare, such as HiTrust which is popular with insurance companies.

So these policies are adopted by the healthcare industry, and they requires all of the vendors serving the industry who are providing them with services to be addressing the compliance requirements. This treatment of security and privacy has an impact on innovation. When an innovative digital health solution goes to a hospital, or a clinic, one of the first things that they say is "let's look at your policies", there are huge questionnaires that must be completed, or there might be a request to see certification (depending on size). MedStack is designed to help digital health companies deal with these requirements.

Guest Speaker Discussion

Privacy compliance is a stack of requirements (physical, technical, and administrative) that tries to respond to a host of questions and scenarios (e.g., how is access granted/revoked, how is access trackd/logged, how is data protected and backed up, what happens in event of a breach, etc.). We identify, and help companies deliver, the safeguards and policies that are required to meet these compliance requirements.

- Physical Safeguards: physical security, serve isolations, disaster management (run in the cloud)
- Technical Safeguards: encryption, network security, internet proxy, intrusion detection, backups, audit logging, monitoring, admin account security
- Administrative Policies: employee training, HR policies, workstation and office security, password policies

MedStack codifies, manages and guarantees 67% of the HIPAA Security Rule. If we study it in terms of HIPAA requirements, we can provide an out of the box solution that can be run by the digital health company, and it can't be turned off. This means that updates to policies and software controls are inherited.

We have built tons of tools that help companies with compliance. For example, if you receive a questionnaire from a hospital client, you send it to the MedStack team and we provide advice on how to answer it. We have all our policies built out and cross-referenced across all requirements standards. This allows us to be able to quickly identify all the policies that pertain to each standard. We also know what the questionnaires are actually asking for – we have a machine learning solution that can identify variations on similar questions and surface answers quickly. Some can be weird. For example, we got a question from the US (using the MIST framework), and they asked "Do you use pattern-hiding display?" It took us a while to figure this out, as we weren't sure what that was asking. After 20 minutes of digging, it turns out It's a screen saver.

Value MedStack Provides to Customers

We do encryption, network security, monitoring, audit logging, backups and certification & key management. We backup everything for our customers, to the requirements that are needed.

We also have partnered with a lot of organizations, and keep track of the customers of our customers. While we may not serve insurance companies or large hospital networks directly, many of our customers are selling to these organizations. As a result, we have a good idea about what insurance companies/hospitals/care providers are asking for from digital health companies looking to sell products to them.

What does our customer need to be able to adopt MedStack? They need to be able to deployed to a Docker container – a standard way to deploy cloud applications. We also handle the two main databases outside of Windows (e.g, MySQL and PostgreSWL) and all the other key components of cloud. We also offer a nice user interface and UPI, so that programmers can integrate using MedStack into their existing workflows. This also support continuous integration and AGILE processes. We have three tiers of pricing – startup, scaleup and enterprise.

Our customers like us, and we've partnered with lots of companies!

We have amazing people and diverse teams. Lot's of different backgrounds, with our team members located all across the country. We are a fully remote company, and now have people in BC, Alberta, and in Quebec.

Thank you

Guest Speaker Discussion

Question & Answers

Question: As MedStack has grown over the last 5 years, how have digital health policies and requirements changed over the last few years? What do you see around the corner with companies or policy makers?

Answer: The privacy and security polices have changed a lot. Just before we started MedStack there was a huge overhaul of HIPAA, and since then we've had GDPR come in changing the regulations for the EU for all data, which has led to the rest of the world playing catch up. We're seeing updates to the law in California, and likely a new federal US law – along with Canada updating its laws. I've heard that changes are coming to Ontario's healthcare regulations. Basically nothing ever stops – its's constantly changing, and that's one of the reasons its tough for a scale-up or startup company to have dedicated resources to handle these regulations. Having a fulltime person watching all of these changes is a huge resource requirement on a small company. This highlights our aim, to make it possible for our customers to focus on the clinical and therapeutic component of their business, rather than on policy compliance.

Question: You mention survey data. Are these insurance-based surveys? Is there a specific example (e.g., patient satisfaction)?

Answer: This is where the insurance company is evaluating a digital health company and its application. Let's say healthcare XYZ company wants to sell to an insurance company. The insurance company will provide the company with a questionnaire, which is quite large, and there can be hundreds of complex questions (e.g., what is default retention period of data stored on CSP systems, and what is process for modifying this retention period). That is what MedStack helps our customers deal with. This is a sales requirement – for a company to be able to sell to an insurance company they must be able to provide satisfactory answers to all the questions in the survey.

Separately, our customers might be dealing with additional surveys (e.g., patient satisfaction), but that's not something that we get involved in.

Question: How does customers selling to insurance companies work? Are they sharing their data as stored in the cloud system?

Answer: Yes. For example, some of our company customers might be focused on providing wellness or mental health solutions to an insurance company. They might receive or send data to an insurance company. The interoperability of that data is a separate specialization that doesn't fall under our MedStack. But just to have permission to share that data, you need to demonstrate capability and capacity to satisfy the security and privacy teams. These teams are gatekeepers and will ask for the surveys/questionnaires and certification reports to validate the digital health solution. MedStack will send our reports and certification to the company, which is often sufficient. It's only when a company gets quite large do they need a SOC2 audit – you just need to make sure that you're cloud compliant. If our customer has additional work, that's usual around revising, creating and/or adopting new policies (e.g., training, tracking, dealing with individual records). We have partners who we work with closely to support the development of these policies if required.

Question: What are the common obstacles and challenges that start-up and scaling companies are generally confronting?

Answer: The pandemic has opened up some barriers that were previously closed, for example telmedicine now has some billing codes in Ontario. Compliance is a big deal. For clinical validation, there is a challenge where companies need to a quick and simple trial to get validation before you can charge for your service. Navigating the procurement process, finding a way to get paid by the hospital – especially in Canada – can be challenging because the public health system can move slowly. There are some new opportunities there like CanHealth.

Guest Speaker Discussion

Question: How does Medstack work with academic spin-outs? Is there a model whereby the companies coming out of an academic setting - that have grant funding - can partner with Medstack (e.g. NSERC I2I grant partner, OCI grant partner)?

Answer: We partner with organizations like Ontario Brain Institute and others organizations that work with startups. We don't have funding partnerships that you're referring to. Our services aren't too expensive, so you'd get the grant and then spend some of the money on MedStack to resolve your privacy/security compliance requirements. Aside from that, we're constantly talking to everyone in Canada who is providing funding to digital health innovation, so we tend to hear about those companies that are expected to do well (and you'll likely have heard of us).

Time allotted | *15 Minutes*

Topic: **Communicate**

Recent successes, upcoming events, innovation pipeline, new products, health innovation trends, etc.

Discussion	Presenter
Fusion Pharmaceuticals to Build Radiopharmaceutical Manufacturing Facility at McMaster Innovation Park Fusion Pharmaceuticals Inc. a clinical-stage oncology company focused on developing next-generation radiopharmaceuticals as precision medicines, today announced it entered a 15-year lease agreement with Hamilton, Ontario-based McMaster University to build a 27,000 square foot current Good Manufacturing Practice (GMP) compliant radiopharmaceutical manufacturing facility. The facility, to be built by McMaster and equipped and validated Read in the full press release here	Alex Muggah (Synapse)
Bay Area Health Trust is Hiring – Director (Finance & Business Analysis) This position reports to the CFO and will be responsible for the operational, financial and strategic analysis of new and existing business opportunities and projects. This position will work collaboratively with the Corporate Controller, Business Unit Leads and Bay Area Executive leadership to ensure the strength, quality and effectiveness of the organization.	John Hands (BAHT)
Bay Area Health Trust Announces McMaster Molecular Medium is Now Available from Cedarlane Corp., Helping in the Safe and Efficient Testing of COVID-19 Samples Throughout Canada Bay Area Health Trust announced its novel molecular transport medium, McMaster Molecular Medium (MMM) is now available from Cedarlane Corporation, one of Canada's leading source of high-quality research reagents for the life science community with access to over 1400 industry-leading global life science suppliers. Under the agreement Cedarlane will provide physical distribution, sales, and marketing to support MMM's growth within the molecular transport medium segment. In September 2020, Bay Area Health Trust announced an exclusive licensing agreement for the McMaster Molecular Medium with McMaster University. Developed by researchers from St. Joseph's Healthcare, Hamilton's Disease Diagnostics and Development Group, MMM will enable labs to safely increase their COVID testing capacity and therefore return results faster. MMM is a temperature-stable storage medium that can maintain coronavirus specimens significantly longer than standard transport media. MMM inactivates – kills – the virus so, unlike in some transport media, it cannot replicate and potentially infect a lab technician. The genetic material is kept stabilized and ready for testing. Another key benefit of using MMM is the ability to pool specimens. Specimen pooling can enable labs to significantly increase their testing capacity. Since most tests produce negative results, only pools that come back with positive results will need to be further tested. MMM has been evaluated across the multiple PCR test platforms commonly used in diagnostic and research labs, is on Ontario's list of preferred vendors and is manufactured domestically.	John Hands (BAHT)

Discussion	Presenter
Maple, Cloud DX and Curatio offer home monitoring, with site at Hamilton Health Sciences (Healthcare Technology, April 28) Cloud DX, a leading Canadian provider of virtual care and remote patient monitoring solutions, announced it is joining forces with fellow virtual care providers Maple and Curatio to create a new Canada-wide COVID-19 home monitoring program that will allow Canadian healthcare organizations to care for COVID-19 patients in their homes. Patients will be equipped with remote automated monitoring technology, efficient clinical oversight and daily disease management support via virtual care. The Canada-wide Virtual COVID-19 Outpatient Program (VCOP) brings together three core elements into one integrated COVID-19 virtual care program "Virtual care and remote home monitoring are game changers when it comes to how we care for patients," says Dr. Mohamed Panju, site chief for HHS Hamilton General Hospital, where one of the hospital's COVID units is located. Dr. Panju is also a physician lead for the remote home monitoring program at HHS. Read the full article here	Alex Muggah (Synapse Consortium)
VoxNeuro enters the United States with game-changing cognitive evaluation Software VoxNeuro has registered with the FDA as a Medical Device Establishment for the distribution of their proprietary Cognitive Health Assessment Management Platform (CHAMP) software, a Class II Exempt Medical Device. VoxNeuro is positioned to globally change the way brain health is managed and treated. CHAMP works in tandem with VoxNeuro's Cognitive Health Assessment to proactively track cognitive health throughout aging, and reactively to evaluate cognitive function when a brain disorder or symptoms related to cognitive dysfunction are suspected. Types of brain disorders that can impact cognitive function include concussion, traumatic brain injury, dementia or neurological impacts of COVID-19. Common symptoms tied to cognitive dysfunction include fatigue, memory loss or brain fog. By analyzing electroencephalographic event-related potential (ERP) data gathered during the 15-minute assessment, CHAMP provides rapid, objective and actionable scores of four key cognitive functions: memory, information processing, attention & concentration. The data enables clinicians to make more accurate diagnoses faster, leading to customized treatments and accurate tracking of how well treatments are working over time, thus helping to ensure the best possible outcomes for patients.	James Connoley (VoxNeuro)
JETRO Discover Life Sciences Canada Series now available The Discover Life Science Canada Webinar Series was created by JETRO Toronto and Shonan iPark to introduce innovation from Canadian Life Science companies to global Japanese corporations, and to help facilitate business relationships between them. The third webinar in the series "Discover Life Science Canada", co-hosted with Shonan iPark in Japan, focuses on the ecosystem in Hamilton, and features startups Triumvira Immunologic, Adapsyn, and Synmedix, with an overview of Hamilton life science ecosystem by the Synapse Consortium.	Tyson Garbe (JETRO)

Discussion	Presenter
Watch the video here	
Innovation Factory working with VoiceHealth – developing app that screens for COVID in 30 seconds (Healthcare Technology, May 5) An Ontario-based medical start-up has co-developed a smartphone app capable of screening for COVID-19, and its variants in 30 seconds. The initiative is being brought to Canada by VoiceHealth Inc, based in Milton, Ontario. They have partnered with Sonaphi, a California-based medical technology company and are also receiving support from the Innovation Factory, a not-for-profit accelerator located within McMaster University Innovation Park, to garner regulatory compliance and complete clinical trials to get the product to market.	Alex Muggah (Synapse)
Kitchener clinic working with Hamilton's VoxNeuro to unlock the brain's secrets For years, a test called an electroencephalogram (EEG) has been used to detect electrical activity in the brain, helping doctors track changes that could indicate a brain disorder. The non-invasive EEG uses electrodes attached to the scalp, and can be used in determining such disorders as epilepsy, stroke, tumour or damage from an injury. But what if it isn't necessarily telling the whole story? A new neurological clinic in Kitchener is using unique technology to better diagnose and treat brain conditions. HeadworX, opened by Dr. Abdel Kaleel on Park Street behind Grand River Hospital a couple of months ago, is employing neurotechnology from Hamilton's VoxNeuro in its suite of tools. A traditional EEG looks at the resting brain, where the patient is in a very relaxed state, said Kaleel, who's also a neurologist at Grand River Hospital. The test looks for evidence of brain slowing or seizure activity localized to one part of the brain. "What VoxNeuro is able to do is to incorporate those EEG signals, coupled with a cognitive evaluation at the same time," Kaleel said. "Together, we're able to obtain a better understanding of these domains of concentration, memory and attention which the EEG is limited in." Read the full Toronto Star article here	Alex Muggah (Synapse)
Mohawk Digital Health Graduate Students Seeking Capstone Projects (deadline Aug 15) Mohawk College Digital Health Graduate Certificate students are seeking projects for their Capstone course starting in the fall (September 2021)! Students will come from a wide variety of academic backgrounds (health, business, technology, etc.) and able to tackle interdisciplinary projects. Projects in the Systems Analysis, Business Processes, Data Analysis, policies and procedures, training and logistics areas are likely to be good candidates. To help determine project suitability and/or to find out more about this program, please refer to our Program Page and/our Program of Studies page. Industry partners will benefit from having an additional project completed with no labour costs and also have an opportunity to work with our students and identify talent for future employment opportunities. To learn more reach out to Joe Varrasso at joseph.varrasso@mohawkcollege.ca	Joe Varrasso (Mohawk College)

Discussion	Presenter
Stryker GM Elected to MedTech Canada Board of Directors Congratulations to Lindsay Williams was elected to represent Stryker on the Board of Directors of Medtech Canada. She will join industry leaders to advocate and position medtech as a critical partner to the Canadian healthcare system, as an economic driver and as a model for innovation, especially as we recover from the global pandemic.	Lindsay Williams (Stryker)
NERV Technology Raises $3.32M as it brings medical sensor tech to market NERv Technology, an Innovation Factory client and Kitchener-Waterloo-based startup offering a sensory platform designed for the healthtech sector, has closed a $3.32 million CAD seed round of funding. NERv has developed a sensory device that is aimed to help doctors monitor postoperative patients remotely, by detecting potential complications. The startup's device can attach to catheters and wound drains, and detects leakages that can lead to critical, sometimes fatal, complications. NERv was co-founded in 2014 by CEO Youssef Helwa and COO Amr Abdelgawad, two University of Waterloo engineering graduates. The startup's executive team also comprises CTO Abdallah El-Falou and lead scientist Mohamed Okasha. The startup raised $1 million in pre-seed funding in 2019, and has raised approximately $2 million in non-dilutive funding and government grants since its founding.	Shannon Graszat (Innovation Factory)
ToeFX & Eye3 to join OBIO 2021 CAAP Cohort The Ontario Bioscience Innovation Organization (OBIO) is proud to announce its 2021 Capital Access Advisory Program (CAAP) and the high-potential health science companies in this year's cohort. CAAP 2021 logos. Hamilton-based ToeFx and Eye3 are set to join 6 other companies that make up the 2021 CAAP cohort. Now in its ninth year, OBIO CAAP companies will work with OBIO and a vast network of expert advisors over the next year to achieve key goals and objectives that will position them for successful financing. OBIO CAAP operates downstream from existing entrepreneurship programs and focuses on accelerating technology commercialization, post-seed financing and strategic partnerships. OBIO CAAP creates high-value deal flow for both companies and investors, culminating with a presentation at the OBIO Investment Summit at which presenting companies have raised over $700M since 2018. Read the OBIO press release here	Alex Muggah (Synapse)
McMaster Cough Monitor (MaCough) receives MITACS Commercialization & Innovation Grant Dr. Imran Satia, in partnership with Dr. Gang and The Clinic @ St. Joe's will be developing a fully-automated, non-invasive, longitudinal objective cough monitor that is wireless & waterproof. This project is aimed to create a quantitative way for clinicians to be able to diagnose, assess and monitor cough more efficiently. We are developing a wearable cough monitor that will be lightweight, inexpensive and fully automated with an algorithm aimed to classify coughs from non-cough sounds. Therefore, this project will aid clinicians in diagnosing, monitoring and assessing cough more effectively to allow for better treatment and monitoring of patients. This project will give partner organizations an opportunity to continue to drive innovation and	Alex Muggah (Synapse)

Discussion	Presenter
technology development in Canada as being the first fully automated cough monitor used in clinics to help diagnose patients with respiratory diseases.	
Webinar: Hamilton's Foreign Trade Zone Program On April 30th, the Invest in Hamilton team held a webinar to inform and educate our community about the new Foreign Trade Zone Program. Speakers and panelists on the webinar included: Invest in Hamilton Hamilton International Airport Hamilton-Oshawa Port Authority Canada Revenue Agency Canada Border Service Agency Federal Economic Development Agency for Southern Ontario Export Development Canada To see the presentation, download it here. If you'd like to watch the recap,	Tammy Hwang (City of Hamilton)
Invigorating the Biopharmaceutical Sector's Contribution to Canada's Health Research and Innovation Ecosystem The biopharmaceutical sector plays an important role in Canada's health research and innovation ecosystem—partnering with academic research organizations, health systems and health charities to sponsor clinical trials essential to bringing innovative medicines to patients, support the commercialization of discoveries arising from Canada's research centres, fund research chairs and scholarships to develop Canada's scientific talent pool, and contribute to health system modernization. Stakeholders have expressed concern that Canada's approach to biopharmaceutical policy, regulation and adoption, including proposed amendments to Canada's Patented Medicines Regulations, may erode the viability of the Canadian pharmaceutical market and weaken industry partnerships essential to the competitiveness, resilience and vitality of our health research and innovation ecosystem. Research Canada, with the support of Shift Health, convened an Expert Advisory Panel to lead an independent study examining the role that industry plays in Canadian health research and innovation and the potential impact that decreased industry involvement may have on the ecosystem at large. Read the full report here	Michael Jones (Synapse Consortium)
CAN Health Network launches Calls for Innovation Can Health Network is inviting Canadian companies interested in participating in a commercialization project to respond to two current Calls for Innovation. Selected companies will have the opportunity to work directly with healthcare operators to test and refine their product or solution in a real life, supportive setting. The two calls are: 1. *Does your company have a product or solution that can improve the quality of care for Canadians?* 2. *Do you know of a company with a product that could increase efficiency for health care operators, saving them time and money?*	CanHealth Network

Discussion	Presenter
New Calls for Innovation will be posted throughout the year to partner companies and healthcare operators across Canada. To learn more about the CAN Health Network model or to view current Calls for Innovation, please visit our website.	
MedTech talent available from Ryerson Talent Accelerator Program Ryerson has created a self-guided learning platform which they use to train students before assisting them with placement in internships/co-ops. They've spun up one for MedTech, funded by NSERC and in partnership with MedTech Canada and the DMZ and McGill University. The platform has dozens of modules to train potential internships, and they can help companies secure MITACS or BioTalent grants to subsidize the cost of the student placement. Separately, they also have another program focused on general IT, which they call the IT Accelerator program.	Adnan Syed (Ryerson University)
Leading the Way Toward Recovery, Resilience and Prosperity": Roadmap for an Integrated Life Sciences Ecosystem in Ontario Life Sciences Ontario (LSO) has announced the launch of the document, Leading the Way Toward Recovery, Resilience and Prosperity: Roadmap for an Integrated Life Sciences Ecosystem, a follow up to the 2017 Blueprint for a Coordinated Life Sciences Strategy. Over the course of the COVID-19 pandemic, organizations across the life sciences ecosystem have shown an unprecedented degree of agility to rapidly innovate, but we as a sector could have been more prepared. This document identifies key priority areas to create a more resilient, prepared, and integrated life sciences ecosystem—across sectors, across academia, across disciplines, across the innovation continuum, and across government. The Roadmap stresses the importance of public-private partnership, strengthened supply chains for SMEs and proactive regulatory and procurement systems that not only help us recover from the pandemic but also position the Province for health security and economic prosperity into the future. The recommendations also include emphasizing the need for dialogue and alignment through different provincial Ministries, and collaboration across the ecosystem to unlock the sector's potential. The document is a follow up to their 2017 Blueprint for a Coordinated Ontario Life Sciences Strategy, a document created to offer a solution-based approach to a coordinated and dedicated life sciences strategy.	Andy Donovan (LSO)

Innovation Canada's newly launched AGS (Accelerated Growth Service) HealthTech program
 	
Last week Innvoation Canada launched AGS HealthTech, now available to medtech firms with $500,000+ in sales or $1-million+ in investment. Firms must be nominated through an Innovation Advisor or partner (BDC, NRC-IRAP, etc.). For AGS HealthTech we're looking for companies that have:
    A focus in health technology (i.e. medical devices or digital health)
    More than $500K in annual revenue or more than $1M in private investments
    A minimum Technology Readiness Level 6 (Testing prototypes in a simulated environment or lab)
    A strategy to manage intellectual property (IP)
    The capacity and willingness to grow
    Strong management
	Joel Adams (Innovation Canada)

Discussion	Presenter
An interest in export markets A focus on innovation And are ready to invest the time and resources to grow Companies can also find a bit more information on our regular Accelerated Growth Service (AGS) program or contact Senior Innovation Advisors Kusala Jayasuriya or Joel Adams directly: kusala.jayasuriya@canada.ca or joel.adams@canada.ca	
Two Canadian Universities won Awards at SAS Hackathon Wanted to bring attention to SAS Hackathon where two Canadian Universities won awards. Also wanted to highlight two other healthcare collaborations with Butterfly Data on a chatbot and a medical device collaboration with Autonomous IDD, Ontario Tech and Pinnacle. More information can be found here	Mark Morrelas (SAS)
Up to $2M in Prizes at MIT Solve: Applications Now Open (deadline June 16) A program devoted to solving global challenges. This year, MIT Solve is looking for high impact innovators to solve these 5 challenges: 1. Digital Inclusion: How can everyone have access to the digital economy? 2. Health Security & Pandemics: How can communities prepare for, detect, and respond to emerging pandemics and health security threats? 3. Equitable Classrooms: How can all young learners have access to quality, safe, and equitable learning environments? 4. Resilient Ecosystems: How can communities sustainably protect, manage, and restore their local ecosystems? 5. Antiracist Technology in the US: How can communities of color use technology to advance racial equity and access economic opportunity, health, and safety? Chosen companies/innovators will be invited to join a 9-month program and will receive access to funding in grants and investments (up to $2 million), meet a strong network of impact-minded leaders, coaches, mentors and peers, receive monitoring and evaluation support, and gain exposure in the media.	Lori Woloshyn (Innovation Norway)
Attend BIO Digital 2021 with Ontario Delegation (June 10-18) BIO Digital 2021, organized by the Biotechnology Innovation Organization (BIO), located in Washington, DC. The event will take place from June 10-11, and June 14-18, 2021. As a company operating in the Biotechnology sector, this may be of interest to you. BIO Digital is the world's largest biotechnology event dedicated to business partnering and the educational sessions; approximately 18,000 attendees are anticipated from across the eco system. The mission package will include: • 1:1 export advice and consultation • Participation in BIO Digital's one-on-one business partnering program, attendance at over 50 educational and keynote sessions, and networking opportunities • Pitch-preparation workshop • Pre-mission webinar • A customized B2B program to connect you with relevant in-market contacts This is a unique opportunity for Ontario companies to make international business connections. For more information contact Patricia Cosgrove: Patricia.Cosgrove@ontario.ca	Carolynn Reid (City of Hamilton)

Discussion	Presenter
Life Sciences Export Business Mission to Medical Fair India 2021 (Aug 19-21) The Medical Fair India focuses on medical products and medical technology, laboratory technology and diagnostics, equipment and furniture for clinics and health centres, and products for physiotherapy and rehabilitation. To participate, or for more information, contact Fanny Mendez: fanny.mendez@ontario.ca	Fanny Mendez (MEDJCT)
The Michael G. DeGroote Health Leadership Academy is pleased to share its portfolio of 2021 leadership programming for aspiring and current health leaders that focuses on learning, and unlearning, the necessary skills to navigate and adapt to our ever-changing health environment. This year we are offering the *Emerging Leaders* and *Pathfinder* programs. Applications are open. Emerging Leaders • Learn the fundamentals of leadership in a health context • Tailored to senior undergraduates and recent graduates • Offered virtually: August 15-22, 2021 Pathfinder • Chart your leadership journey with personalized coaching • Tailored to health leaders, young professionals and post-doctoral/graduate students • Offered virtually: Sept-Nov 2021 The Michael G. DeGroote Health Leadership Academy is a joint venture between the Michael G. DeGroote School of Business, Faculty of Health Sciences and the Michael G. DeGroote School of Medicine at McMaster University. For more information about our programs, please visit healthleadershipacademy.ca or contact Amanda: calzolaa@mcmaster.ca	Amanda Calzolaio (McMaster Health Leadership Academy)
MGD-HICE Educational Webinars & DevTank Meetings Operating out of the Michael G. DeGroote School of Medicine at McMaster University, the Michael G. DeGroote Health Innovation, Commercialization & Entrepreneurship (MGD-HICE) aims to accelerate the exploration of health innovation opportunities and creation of socioeconomic impact. Check out the full suite of programming here	Sarrah Lal (MGD-HICE)
Government Calls for Innovative Solutions • Call for Suppliers (Federal): In support of the Government of Canada's whole-of-government response to Coronavirus disease (COVID-19), they are asking suppliers about their ability to provide a variety of products and services. • Call for Suppliers (Ontario): request for information from companies able to supply emergency products to help fight Coronavirus • Federal Government Call to Action for Canadian Manufacturers to support businesses to rapidly scale up production or re-tool their manufacturing lines to develop products made in Canada that will help in the fight against COVID-19. Please refer to the product specifications and requirements for Canada's medical supply needs. • Health Canada will facilitate earlier access to a vaccine, or therapeutic product for COVID-19 to expedite the review of COVID-19 related health product submissions and applications.	Innovation Factory & Synapse Consortium

Discussion	Presenter
- Government of Canada is speeding up the importation and sale of medical devices used to diagnose, treat or prevent COVID-19. Here is information about expediting access and authorization for diagnostic devices for use against coronavirus (COVID-19). - Government of Canada will launch specific challenges through the Innovative Solutions Canada (ISC) program and will rapidly select the best projects to accelerate development and testing of promising innovations that can have a direct impact on our health care response. Also use the ISC Testing Stream to become the first customer of these innovative products. - The National Research Council of Canada (NRC) will organize an NRC COVID-19 Challenge Program, composed of teams of government, academic and private sector partners to address a range of medium term PHAC and HC needs, including personal protective equipment, sanitization, diagnostic and testing, therapeutics, and disease tracking technology. The most promising solutions will be selected for procurement, working with Innovative Solutions Canada. - DISRUPT COVID-19, a Government of Canada virtual forum that will include representatives from the National Research Council (NRC), the Industrial Research Assistance Program (NRC IRAP), Health Canada, the Public Health Agency of Canada (PHAC) and Innovation and Science, Economic Development (ISED), is being organised as a pilot initiative with the goal of getting technologies on the ground helping patients and health care professionals as fast as possible. - Next Generation Manufacturing (NGen) will invest $50 million in Supercluster funding to support companies as they rapidly respond to the COVID-19 pandemic by building a Canadian supply of essential equipment, products, and therapeutics. For more information on NGen's COVID-19 Response Program, see the full bulletin, review the project guide, and share your capabilities in the form below. - Ontario Website for PPE Suppliers to Post Products for Sale: Review a list of companies that sell personal protective equipment (PPE) and other supplies to keep your employees and customers safe from COVID-19. Apply to be added to the workplace PPE supplier directory The Digital Technology Supercluster has launched the COVID-19 Program is focused on unlocking solutions to protect the health and safety of all Canadians and our economy through the development, deployment, and scaling of digital technologies.	

Time allotted | *15 Minutes*

Topic: **Collaborate & Accelerate**

Partnership opportunities, programming and resources available to the community, market gaps and challenges, learn about potential funding opportunities, discuss new RFPs issued, etc.

Discussion	Presenter
Want to Connect with your Ecosystem: Check out the Synapse Health Ecosystem Directory Synapse has created a Director of +200 private- and public-sector organizations in the Hamilton (and regional) health innovation ecosystem which work alongside the Synapse Consortium to support of the commercialization of health innovation. Learn more about what others are up to, and identify potential collaborative partners at: www.synapseconsortium.com/directory	Alex Muggah (Synapse)
Engaging Mohawk College's IDEAWORKS IDEAWORKS projects in general (of which, MEDIC is one area) which was provided and may help with identifying if Mohawk College can support our companies with projects. This might be a refresher for some or all of us, but highlighting nonetheless: Tips for Innovation Factory Referrals to IDEAWORKS • Our four innovation centres (MEDIC for Digital Health, AMIC for 3D printing, EPIC for energy efficiency related projects and MTIC for Medical Technologies related challenges) are active during this time- but note that due to existing commitments, are often looking at projects one month to three months in the future. • Other areas of expertise are on a case by case basis, especially this year, with a number of our faculty committed to teaching and revamping courses • The ideal applied research partner is one that is in the scaling stage; they have some revenue and can meet a lot of the funding agencies criteria for funding or want to self-fund a research project. Typically what we look for is 2+2; two years in business with two employees • We recommend working with us on projects that aren't mission critical but can help the company explore an innovative idea. What about start-ups? • If they require a few tips or advice, we can normally chat with them (or if there is a critical mass -like five or six companies in a space-, we can do a webinar type discussion). • They can see about the availability of capstone projects, where students generally work on projects for a four month period, for free, in order to get course credit. It may help with MVPs. Contact Andrea Johnson for more information: andrea.johnson4@mohawkcollege.ca	Andrea Johnson (Mohawk College)
The CONNECTION - McMaster University Online Partnerships Portal! The Connection is a new program offered by McMaster's Office of Community Engagement (OCE) designed to facilitate online, mutually beneficial partnerships between campus and local Hamilton community organizations. As communities look for ways to adapt and rebuild in response to COVID-19 The Connection will make the process of addressing Hamilton community and University identified needs easier by providing online tools and resources.	Gay Yuyitung (MILO)

Discussion	Presenter
It's a way for everyone who sees themselves as part of a collective community-campus effort to connect and respond to COVID-19 locally	
Collaborating with McMaster Institute for Infectious Disease Research (New Intake Form) In addition to our ongoing COVID-19 research initiatives at McMaster, the Michael G. DeGroote Institute for Infectious Disease Research is mobilizing its strong research community to assist Canadian researchers and businesses in their attempts to find solutions to the international crisis. The IIDR teams have the capacity to assist with the testing of anti-viral compounds and products, as well as the testing of products or devices aimed at sterilization. This includes new methods for sterilizing personal protective equipment. They are able to offer services in the following areas: • BSL2 cell culture infection with representative human coronaviruses; • Testing of methods or products that are designed to inactivate the virus; • Biochemical/enzyme studies with anti-viral agents. Cell culture and small animal models of SARS-CoV-2 infection can be performed in McMaster's secure biosafety level 3 facility. Availability for BSL3 testing is very limited, and projects requiring this type of work will be screened and prioritized by an internal committee. If you have a product or innovation that you are interested in pursuing further and feel that we could be of assistance to you, please reach out to us through the online form. Each project will be evaluated to determine if McMaster has the capabilities and capacity to perform the required testing.	Gay Yuyitung (MILO)
Hamilton-based technologies available for licensing Each year researchers at McMaster, Hamilton Health Sciences, and St. Joseph's Healthcare Hamilton make new discoveries that lead to new products, services, or process improvements to help companies expand their pipeline or increase their productivity. The business development team at MILO is here to help you tap into and access these discoveries as efficiently as possible. MILO's objective is to support effective transfer of these technologies to companies for social and economic benefit and enable the continued growth of research excellence at the institutions. Please contact Glen Crossley, Associate Director, Business Development and IP or search the list to see some of the technologies currently available for licensing or further R&D	Glen Crossley (MILO)
Hamilton Innovation Partnership Portal Synapse has created the Hamilton Innovation Partnership Portal (HIPP) to make the process simpler and more streamlined to find new partners within Canada's leading health research and educational ecosystem. It is a way for companies to interact with the Hamilton community. A streamlined approach, to have Synapse represent everyone. We've set up an intake form for companies to direct request to the portal. Portal is online through the Synapse website: http://synapseconsortium.com/partner/	Andrea Lee (HHS)

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Discussion	Presenter
Submit Community Events on the Innovation Factory Calendar Our calendar is home to Innovation Factory workshops and networking events as well as events from the community which help support our local entrepreneurs and businesses. If you have an event which may a fit, please submit it and we will review it within five business days.	Annie Horton (Innovation Factory)

Our Synapse Consortium partners are at the forefront of addressing COVID-19 in the City of Hamilton, and across Ontario: doctors and nurses caring for patients, public health officials coordinating city-wide responses, conducting epidemiological research at Canada's leading research hospitals, and innovative companies developing products to provide needed supplies and services.

Throughout all of this, Synapse remains committed to our core goal of facilitating connections across the Hamilton health ecosystem, bringing public- and private-sector actors together to enable innovation and resolve pressing health challenges. While Synapse staff are not in the office, we're still providing support virtually – so please continue to reach out and find out how we can help!

If you want to get in touch, please contact Alex Muggah, Director of the Synapse Consortium. Separately, we've assembled links to information that has been compiled by organizations across Ontario (and Canada) to assist you with navigating the COVID-19 pandemic.

Learn More About COVID-19: Online Resources

Synapse Consortium partners have put together a significant amount of information and updates on the status and activities related to containing and addressing COVID-19 for both businesses and citizens in the region:

Hospitals and Research Centres
- Hamilton Health Sciences: COVID-19 Updates
- St. Joseph's Healthcare: Research Institute and Hospital Update
- McMaster Institute for Infectious Disease Research: News and Updates
- McMaster University: COVID-19 Update
- Mohawk College: COVID-19 Update

Hamilton Community Partners
- Mohawk College Collaboration Landing Page
- McMaster University Collaboration Landing Page
- City of Hamilton: City Response and Resources
- Hamilton Public Health: Learn more about COVID-19
- Innovation Factory: COVID-19 Info Centre
- Hamilton Chamber of Commerce: Resources for businesses
- Hamilton Spectator: What you Need to Know in Hamilton
- Buy-Local (Hamilton): Hometown Hub

Government and Agencies
- Health Canada: COVID-19 Information and Resources
- OCE: Collaboration Platform
- Government of Ontario: COVID-19 Information for Ontarians
- Government of Canada: Business Support

For Companies Making COVID-19 Related Medical Products
- Call for Suppliers (Ontario)
- Call for Suppliers (Canada)
- Health Canada: Expedited Review of Health Product Submissions and Applications for COVID-19
- Health Canada: Applications for medical devices under the Interim Order for COVID-19 use
- Health Canada: Expedited Access and Authorization to make COVID-19 personal protective equipment
- Health Canada: Diagnostic devices for use against coronavirus (COVID-19)