



Face shield
by Tinkerine
Studios Ltd.

The ChangeUp

**Before the pandemic, they were
carmakers, brewers and clothiers.
Now they're making the things
Canadians need to survive.**

BY MATTHEW HAGUE

COVID-19 has affected every business in Canada. Most of the companies that survived lost clients, cut salaries and laid off employees. More than a million Canadians lost their jobs in March alone, and the national economy is expected to contract by more than six per cent in 2020, according to the International Monetary Fund.

Yet dire times have led to innovation. More than 5,000 Canadian companies—large, small and in between—have shifted their focus to help with the pandemic. Clothiers have switched from polo shirts to protective masks, breweries are making

hand sanitizer instead of beer, and auto manufacturers have pivoted to produce the desperately needed ventilators that keep those worst afflicted by the disease breathing.

Many of these companies are responding to a shuttering international supply chain, which has left Canada bereft of essential personal protective equipment: scrubs, masks and face shields. Others are keeping us well nourished despite restaurants closing en masse. Here, five companies across the country that reinvented themselves in the crisis.



“Our moment to serve”

FCPA **Rick Jamieson** temporarily stepped away from his job as president and CEO of ABS Friction, a brake-pad manufacturer in Guelph, Ont., to co-found a company building 10,000 ventilators.

“In early March, I was at my winter place in Florida, playing golf, enjoying the sunshine. My wife and I flew back to Canada on March 12 for a meeting and a Leafs game, thinking we’d only be up north for a few days. We left one of our cars and all our summer clothes down south. I don’t know when we’ll get back there.

Soon after I came back to Canada, a friend of mine, Jim Estill, the CEO of Danby Appliances, asked me to join a consortium he was putting together, a group of manufacturers trying to find a solution to the ventilator shortage. I’m a CPA by background, a tax accountant. I’m not an engineer. And making brake pads is very different than ventilators. They aren’t something I could do at my factory in Guelph. But Jim persisted, putting together a diverse team in what is now called Ventilators for Canadians. We each bring something different, something valuable. Scott Shawyer, CEO of robotics company JMP Solutions, has a lot of engineering expertise. Paul L’Heureux, CEO of Crystal Fountains, a company

that makes architectural water features, can rapidly prototype anything. We have medical expertise through our partners Baylis Medical and Medtronic, both of which make medical devices.

My background as a CPA has helped a lot, too. It’s helped us in contract negotiations and in our thinking about all the risk management involved. Our original plan was to bootstrap, using money from our own companies. That plan, however, became difficult when the economy fell apart. Our businesses started to suffer and we all had to start laying off staff, so we decided to fundraise. Two very generous anonymous donors pledged \$3 million, so we put together a contract proposal for the federal government for further financing. In early April, we made a deal with the feds to deliver 10,000 ventilators by mid-September.

I think of the first few weeks of Ventilators for Canadians as a sprint, a dash to put together the plan and the money. Now I think that we’re in a marathon phase, doing the hard work to ensure the ventilators get made—that all the materials and parts come through, that our various assembling facilities produce what we need. Since mid-March, I haven’t had a day off. Most of my days have started at 6:30 a.m. and ended at 10:30 p.m. I’ve barely had time to think about my car and clothes in Florida, let alone my actual business, ABS Friction, which I’ve fortunately left in the care of two capable managers. But my partners—Jim, Scott, Paul—are grateful we have the energy and expertise to do this. None of us have ever fought in a war. We think of this as our moment to serve the country, much like our fathers did when they fought in World War II.”

“Everyone needs comfort right now”



Montreal restaurateur **Mandy Wolfe** repurposed her restaurant chain, Mandy's Salads, into a mini grocery emporium that delivers free food to frontline workers.

“At the beginning of the shutdown in March, our restaurants immediately switched from being full-service to just takeout and delivery. Although it was emotionally very hard—we had to lay off some staff—logistically, it was a fairly easy transition, a bit like going back to our roots. Long before we had seven locations across Montreal, we operated out of the back of a woman's dress shop and only did to-go orders because there was nowhere for people to sit.

In part because the initial transition was easy, we were able to change our business in bigger, more important ways. For example, our canned goods and fresh produce suppliers saw their businesses immediately dwindle. They normally shipped food

to university campuses, events venues and other restaurants—all of which had closed. Instead of letting food go to waste, we offered to sell the raw goods, by either delivery or pickup at Mandy's. In addition to our regular salad bowls, customers can now get raw kale, kids' snack packs, bags of chips—lots of things. In effect, we've become a little grocery store.

In order to remain operational, we are following all local public health guidelines to ensure that our staff and customers maintain physical distancing while either preparing or picking up orders. We have also learned a lot by researching Spanish chef José Andrés. He set up food tents outside of the Crown Princess cruise ships docked in Tokyo and Oakland, Calif., to help feed the people quarantined onboard. We have taped off paths through the stores that guide people to their orders, blocked off our staff behind Plexiglas screens, and keep staff two metres apart at all times.

Although the crisis has been exhausting—hasn't this felt just like one long day?—it has also inspired us to be a lot more charitable. At the outset, the defencemen from the Montreal Canadiens gave us \$2,500, essentially pre-buying meals for frontline workers. That tab was used within 24 hours. But we're still giving back to the community. Three days a week, we drop off hundreds of meals to local hospitals. Doctors and nurses are working around the clock and need sustenance to survive. Even for our regular customers, sometimes we throw free goodies into their grocery boxes, like freshly baked chocolate chip cookies that we haven't sold by the end of the day. The cookies give people comfort, which everyone needs right now. We aren't making any money doing any of this. All we are trying to do is keep the business alive during the pandemic in the hopes that it can flourish again afterwards.”



To-go bags at Mandy's Atwater location; above, Mandy Wolfe, left, and her sister and co-founder, Rebecca Wolfe



A worker handles fabric inside the Canada Sportswear factory in north Toronto

“An important wake-up call”

Ralph Goldfinger, the co-CEO of Canada Sportswear in Toronto, stopped making pants and polo shirts and started making masks and gowns.

“We have been a family-owned apparel company for more than 65 years. We mainly wholesale outerwear—jackets, polo shirts, pants. With COVID-19, the demand for traditional clothing has been curtailed. As a business, we are here to serve people’s needs. So, we had to ask ourselves, ‘Okay, what is required today?’ People are looking for essential protective garments, including masks, gloves and hospital scrubs that tie up at the back. Doctors and nurses need them the most. But regular folks are also looking for masks, especially after the CDC and Health Canada reversed their positions, telling people to wear masks in public.

We’ve made a pivot to meet that demand. By the first week in April, we had orders for more than 100,000 masks and 60,000 gowns. We have a team of about 50 people sewing cloth masks and gowns at our factory in Toronto. With our sewing expertise, cloth masks are something we can do relatively easily. And our staff is very happy to be working on them. I mean, everyone is a bit tense showing up to work these days—including me. There’s a bit of fear. The mood at the factory is tense, because

people are afraid of getting sick. But we’re following health and safety guidelines, and the factory is large enough that we can keep people apart as they work. It’s also nice that we’ve been deemed an essential service, so we can keep the business going and keep people employed.

Compared to cloth masks, N95 masks are trickier to produce. They need to be fitted a certain way, require special fabrics that block out the smallest microbes, and aren’t usable on the front lines unless they have been approved by different health organizations, including Health Canada. We can’t just make those ourselves, but we’re looking for options to import from China or elsewhere.

A lot of the demand for masks is from health-related companies, including retirement homes and long-term care facilities. We’re also getting inquiries from retailers. Even when we get past the peak of the pandemic, I imagine that demand for masks will continue, though not at the same level. Culturally, many Canadians have never worn masks on a regular basis, the way you see in countries such as Japan. But I think that will change, and people will get used to it, to maintain a sense of caution until a vaccine or medication is available.

I also think that COVID-19 might be an important wake-up call for Canada. We have to be more independent when it comes to domestic manufacturing. As a company, Canada Sportswear has been producing clothing in Toronto since 1954. We’ve also seen how much production has been sent overseas because consumers won’t pay just a little more for made-in-Canada goods. Maybe that will shift. One thing the virus has shown is just how fragile international supply chains can be.”



“We wanted to help”

Tinkerine Studios Ltd. CEO and founder **Eugene Suyu** used to make 3D printers. Now the company produces 20,000 face shields for doctors and nurses every week.

“Tinkerine started out as a hardware manufacturer, making 3D printers as well as educational software and content for schools and teachers. COVID-19 closed schools suddenly, which might suggest that our core business was hurt. Although teachers haven’t been in classrooms, our clients, the school boards, are still running, and are still planning new orders for when schools reopen. But friends, family and the media kept telling our team that frontline workers needed personal protective

equipment. We wanted to help. We simply wanted to make an impact.

Producing face shields for nurses and doctors might seem like a big shift from producing 3D printers for schools. It’s not. Our manufacturing and design background gave us a good understanding of how to scale production. Much like we listened to the needs of our educators and students, we also



Suyu with Tinkerine’s fleet of 3D printers

listened to the needs of doctors and nurses, creating iterations of the face shields—eight in total—until we came up with a successful version.

At the outset, we mainly used our own 3D printers to produce the components for the face shields—the headbands and fastening clips—and a laser cutter to cut sheets of clear plastic for the visors. That allowed us to produce between 200 and 300 face shields a day. But we were getting orders from hospitals across North America for up to 30,000 face shields. To ramp up, we started using die-cutting and injection-moulding. That expanded our capacity to 20,000 face shields per week, each reusable if sanitized, all produced in accordance with Health Canada regulations.

I’ve always been an optimistic person. I think you have to be to work in education. It’s all about making the trajectory of the world better by reaching young people, doing things that will affect their lives in 10, 15 years. That motivation helps justify the long hours right now, especially when I can see our work making a difference. To further extend our capacity, we opened up our production to educational institutions and anyone else with a 3D printer, so that they could help by printing some of the components. When ready, they can send the pieces to us for sterilization and incorporation into the face shields. That might be a more powerful lesson than they could ever learn in a classroom.”

“We met our goal, then doubled it”

Charlie Angelakos is the vice-president of legal and corporate affairs at Labatt, which produced 100,000 bottles of hand sanitizer in breweries countrywide.

“Whenever there is a natural disaster—ice storms, droughts—Labatt shifts production at our facilities from beer to drinking water. During crises such as the 2016 Fort McMurray wildfires and the 2018 floods in New Brunswick, the Labatt Disaster Relief Program has provided more than 460,000 cans of clean drinking water to residents and on-the-ground responders.

So far, there has been no shortage of drinking water because of COVID-19. But alcohol-based hand sanitizers have been hard for many to find, even those who need them most, such as frontline workers. And the one ingredient we have readily available at our brewing facilities that’s critical to the production of hand sanitizer is alcohol.

The process of setting up the hand-sanitizer production has been much trickier than switching to drinking water. Because the sanitizer we’re producing has 80 per cent alcohol content, to meet the COVID-killing guidelines of the World Health Organization and Health Canada, our first step was to identify any of our facilities rated for flammable liquids. That also created a number of shipping considerations to deal with, as hand sanitizer must be handled as a ‘dangerous good.’ To boot, the process cannot be automated. It’s manual. All the mixing, filling, labelling and packaging is done by hand, which required special staff training. So we mobilized all of our facilities across Canada that had the capabilities to produce the hand sanitizer, including our plants in Vancouver, Edmonton, London, Toronto and Montreal. That localized model made it easier to distribute the sanitizer when ready.

Our initial goal was to make 50,000 250-mL bottles. After we met that goal, we doubled it. We are keeping some of the supply for our business-critical employees in our breweries, distribution centres and frontline sales. For the most part, though, with the help and direction of Food Banks Canada



Labatt VP Charlie Angelakos

and their national network, we are giving the bottles, free of charge, to groups and individuals that need them most. That includes frontline staff in restaurants that offer takeout and delivery. Many restaurants have been shuttered because of COVID-19, but those that are open are doing a lot to support their communities, keeping people fed. The least we can do is support those restaurants in return.” ♦