

## Cleantech startups and the COVID-19 challenge, major risk or activity booster?

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The COVID-19 crisis hit the cleantech startups suddenly and strongly this spring, like most industry sectors. To understand its consequences the Swiss Energy and Environment Innovation Monitor ran a survey among startups in the cleantech and sustainability fields in May 2020. 28% of the startups in the cleantech field experienced either a positive effect or no effect of the COVID-19 crisis. The remaining 72% were negatively affected. Fortunately, thanks to their agility and capacity to react, startups were able to manage relatively well through the first half of 2020 with the COVID-19 crisis. The “startup culture” is a strength to face such situations where uncertainty becomes the rule. This article and the interviews that follow show in detail, with examples, how startups reacted in Spring 2020 to the uncertainty.

It was, and still is, a fear that investments in startups might drop. So far, this is not confirmed by

the data. However, experts underline the difficulty to anticipate the consequences of the crisis and their advice to startups is to be careful about the coming months and to be ready to live with less and last longer. It is possible that raising money will become more “expensive” in the coming months and years, meaning that investors will re-evaluate startups downwards and thus more equity will be necessary to secure the same capital. This is a situation that startups raising money should be prepared to face.

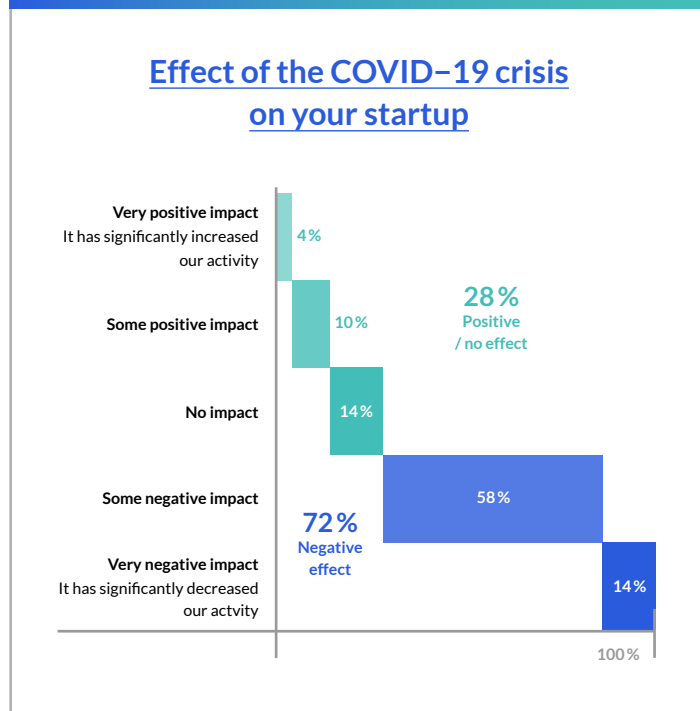
Europe seems the best market to focus on for Swiss-based cleantech startups in the coming months, as the most ambitious climate and environmentally focused funding will be integrated into a COVID-19 stimulus response. In addition, travel is likely to be difficult for some more months, or even years, which makes far away markets more difficult to reach.

**Please note:** interviews of CEO of startups are available at the end of the article.

The authors would like to thank aquama, Äss-bar, Daphne Technology, greenTEG, MagicTomato, Methanology, OrbiWise, Power-Blox, Smarthelio, Solaxess, and Swiss Precision Lightning for their time and valuable inputs.

The COVID-19 crisis hit the cleantech startups suddenly and strongly this spring, like most industry sectors. To understand its consequences the Swiss Energy and Environment Innovation Monitor (Innovation Monitor) ran a survey among startups in the cleantech and sustainability fields in May 2020. Results show that for 28% of the startups, the crisis had either no effect, or a positive effect, as shown in Figure 1. Indeed, 14% of the startups experienced some positive or very positive effects. For the remaining 72%, the effect was negative, including 14% for which it was very negative.

Fig.1 – Repartition between startups positively and negatively impacted by the COVID-19 crisis



Positive consequences are mostly linked to markets that grew very quickly, like in the disinfectant space for **aquama** or the online sales of food products for **MagicTomato**. Aquama, for example, achieved the same turnover in three weeks as they did in total in 2019. MagicTomato had an increase in demand by a factor of 5. Generally speaking, and not only in the cleantech field, all virtual/online services have seen a large boost in demand. This sudden growth had other consequences, like the need to hire a lot of engineers quickly at aquama. MagicTomato had to re-organise and change practices to adapt. They stopped delivering the day of the order and also developed a partnership with taxis, who had a lot less work, to deliver orders.

The situation was very different for all startups that need physical interactions with their clients. **Äss-bar** had to deal with a sudden drop of 60 to 70% in sales. For **Power-Blox**, a company working with developing countries, not being able to travel was a tricky situation to manage. Another example: **Swiss Precision Lightning** had just finished a demonstrator in Switzerland and was not able to use it for demos or as a proof of concept for investors who were not able to travel from abroad. The sales team of **OrbiWise** was unable to meet customers and all industry events were cancelled, which affected the startup's sales.

In some cases, a drop of activity in the target market of a startup forces it to look for alternatives. This happened to **GreenTEG**: previously focusing on the building sector, the startup saw opportunities in medical application for body heat measurements and developed them.

Startups that have suppliers in other countries also faced difficulties. **Solaxess** was almost ready to produce their solar panels, however a machine from China could not be delivered due to the shutdown there. **Methanology** and **Daphne Technology** faced similar challenges and also saw prices of components increasing. **Swiss Precision Lighting** underlines the fact that startups have to understand that cheaper is not always better.

Fig.2 – Description of the challenges cleantech startups are facing during the COVID-19 crisis

“ What challenges did your startup face ? ”



Producing in Switzerland has its value in such circumstances: proximity, relationships and, last but not least, the added value is produced and kept in the country.

Overall, and as shown in figure 2, most of the difficulties' startups faced were about the sales of their products and services (for 23% of the startups), a slowdown of project development (21%) and a higher complexity to access funds (17%).

## About the startups

### **aquama**

[www.aquama.com](http://www.aquama.com)

Aquama produces a unique disinfectant made only out of water and electricity. The company aims at replacing chemical products with a natural solution which is biodegradable in just a few minutes.

### **MagicTomato**

[www.magictomato.ch](http://www.magictomato.ch)

MagicTomato is a web platform for daily food shopping from local producers. It is an online market where orders are prepared with fresh products, and delivered during the day.

### **Äss-bar**

[www.aess-bar.ch](http://www.aess-bar.ch)

Äss-bar resells bakery food from the previous day which is picked up across cities. They have eleven branches in nine cities.

### **Power Blox**

[www.power-blox.com](http://www.power-blox.com)

Power Blox produces self-learning, autonomous and self-regulating technology that enables decentralized power control and storage within the grid. It combines different energy sources and battery systems ("The Internet of Energy").

### **Swiss Precision Lighting**

[www.splighting.ch](http://www.splighting.ch)

Swiss Precision Lighting focuses on an energy efficient

precise light system to avoid light emissions and light pollution. The startup produces a light system adapted for sport fields, as well as other applications, that is modular and adaptable.

### **OrbiWise**

[www.orbiwise.com](http://www.orbiwise.com)

OrbiWise develops advanced technologies for the Internet of Things (IoT) industry. The main focus is on Low-Power Wide-Area (LPWA) radio technologies, which enable long-range connectivity between gateways and low power devices.

### **GreenTEG**

[www.greenteg.com](http://www.greenteg.com)

GreenTEG develops energy and medicine products such as heat sensors for measuring body temperature, and for the photonics industry (laser) or building industry.

### **Solaxess**

[www.solaxess.ch](http://www.solaxess.ch)

Solaxess develops a technology to make solar panels more attractive and aesthetic (white or colored), so that they are no longer hidden but shown on facades.

### **Methanology**

[www.methanology.com](http://www.methanology.com)

Methanology is developing the next generation synthetic fuel based on renewable methanol. The startup uses the carbon dioxide coming from farms or air, and transform it through a biocatalytic way with enzymes to methanol.

### **Daphne Technology**

[www.daphnetechology.com](http://www.daphnetechology.com)

Daphne Technology is an EPFL spin off that mitigates air pollution in the transportation sector.

A nanotechnology reduces toxic pollutants (like nitrogen oxide and sulfate oxide) from exhaust gas, particularly in the marine industry.

### **SmartHelio**

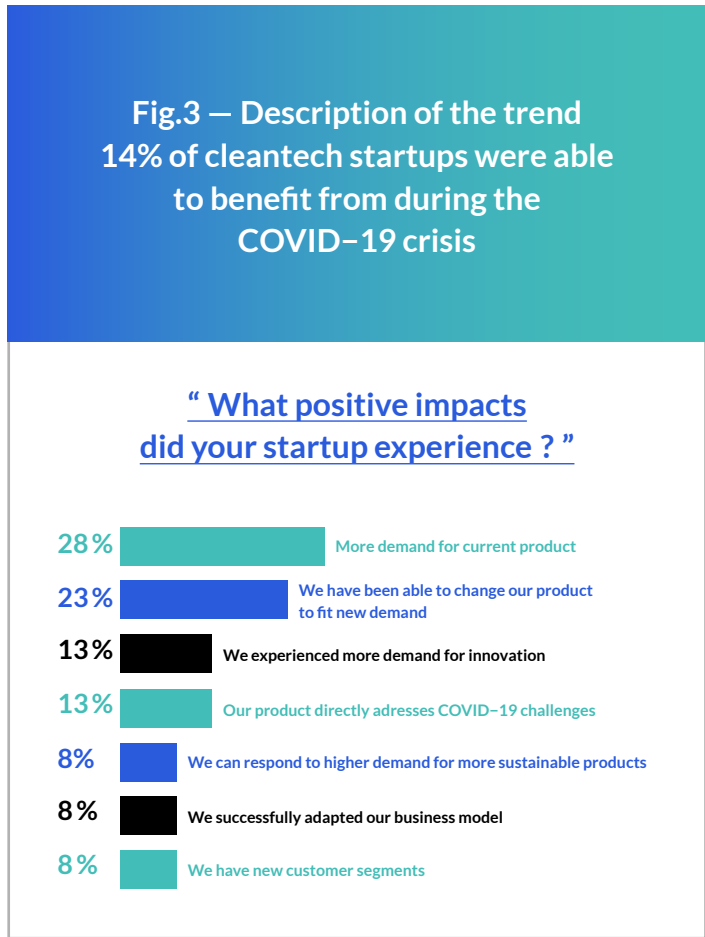
[www.smarthelio.com](http://www.smarthelio.com)

SmartHelio uses artificial intelligence to maintain a high efficiency of solar panels by detecting problems and failures. With sensors they find solutions to fix the problem and anticipate how the solar panel will behave.

Figure 3 shows that the startups that profited from the crisis are mostly those for which the market grew quickly or that could position themselves to meet new demands on new or existing markets, like greenTEG or Power-Blox.

The virtualization of all activities also necessitated a more proactive human resources management and lead to more interactions with and between employees. OrbiWise organized short morning video-calls to ensure that employees were feeling good.

Generally speaking, the agility of startups, not limited to cleantech startups, and their capacity to adapt was an advantage



**5 advices to startups to get through the crisis**

The Innovation Monitor asked CEOs of cleantech startups to give their best advice to other startups to navigate through the crisis. They can be summarized in five key points. They are true during the COVID-19 crisis, but are also good advice for any startup any time:

- 1.**  
**Focus on customers first**  
Always stay focused on your mission and making sure you respond to client’s needs.
- 2.**  
**Have a plan B or a survival plan**  
Think of the worst and always have an identified path to manage that situation.
- 3.**  
**Develop your network**  
You cannot start developing it when you need it, it’s an on-going activity that is maintained from the start.
- 4.**  
**Never give up**  
Be active and be in a “What can we do?” spirit, always.
- 5.**  
**Develop partnerships**  
You will be stronger with trustful partners.  
As a startup, you cannot have all competences.  
Partners can also support and help during crisis.

**How did startups react ?**

One of the big advantages of working as a startup is agility to adapt, which proves to be useful in crisis situations. Startups can reorganize quickly. When combined with a good anticipation process, this is a key to success. For aquama, having links to Singapore enabled them to anticipate the consequences of the crisis in Europe and get prepared early. Being agile, they could adapt to fulfill the needs of customers during the COVID-19 crisis.

The agility of startups also enables them to quickly change priorities. Smarthelio reorganized their R&D project and started to spend more time to do virtual marketing and market exploration. Äss-bar decided to change opening hours, but also had to increase safety measures to reassure clients. They set up a home delivery service, equipped employees with masks, and increased communication with employees and customers.

Jordi Montserrat from Venturelab also shared his advices for startups: “My three pieces of advice for startups are:

**1.**

**Think long term**

For once, it is better to be conservative and avoid taking risks,

**2.**

**Get financial help**

Look for all possible financial helps and be in touch with investors. Even if they don't invest a lot, they are still active,

**3.**

**Innovate**

Carry on the R&D and find innovative ways to stay in touch with clients”.

compared to others. Aquama summarizes it well with the following advice for other startups: “By using the agility of the company for the service of the common good, your work can only succeed”.

The University of St. Gallen (HSG) also conducted a survey on the impact of the COVID-19 crisis on startups from HSG, with some interesting results (40 startups answered the survey):

- 12% of startups have not been affected by the current crisis,
- 60% of those startup experiences a decrease in sales,
- 5% have seen an increase in their commercial activity,
- 7% of the participating startups lost at least one of their current investors,
- A large proportion, 43%, saw short-term opportunities rising and 47% long-term opportunities.

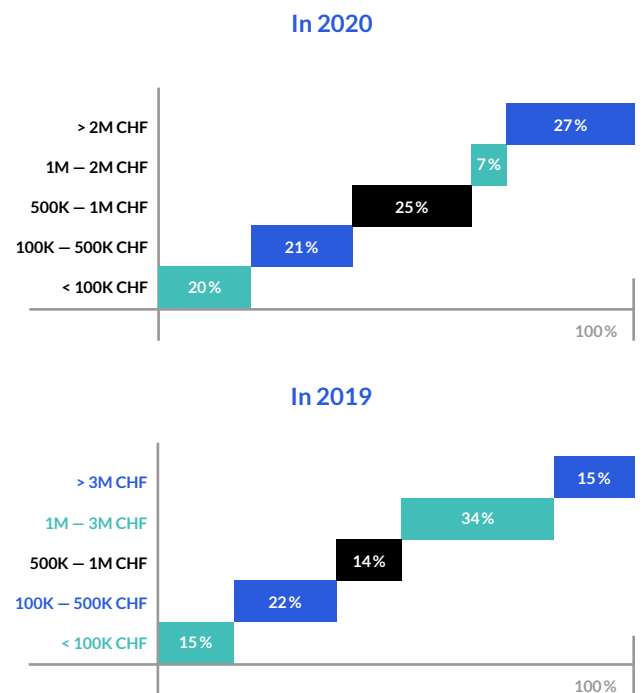
A high capacity to act and agility to adapt are two of the main conclusions of that survey, underlying the resilience of startups.

**Fundraising during the COVID-19 crisis?**

The Innovation Monitor survey also asked the cleantech startups about their investment needs for 2020. Compared to 2019, there seems to be a decrease in large investment needs in 2020. Only 34% of the startups are looking for more than 1M, compared to 49% in 2019 (figure 4).

**Fig.4 – Size of next investment round among Cleantech startups**

**“ What challenges did your startup face ? ”**



Three of the startups interviewed underlined the challenge of the relationship with investors during the COVID-19 crisis. The startups Daphne Technology and Methanology both lost an investor. In the case of Swiss Precision Lightning investors could not travel to Switzerland to see the product demonstrator.

Jordi Montserrat, from Venturelab, underlined the fact that the cleantech sector in the past years did not encounter the boom one could have expected: “We haven't seen massive investment in that field, although the needs seem to grow”. One of the only examples of large investment in Switzerland in that field is Climeworks (Climeworks is developing a CO<sub>2</sub> capture technology directly from the air) with close to 100 million CHF.

In May 2020 experts were expecting the following regarding investment during the COVID-19 crisis:

- Investors would carry on investment, a kind of trust remains,
- The number of transactions will be reduced,
- All sectors are impacted, except companies enabling others to digitalize their activities,

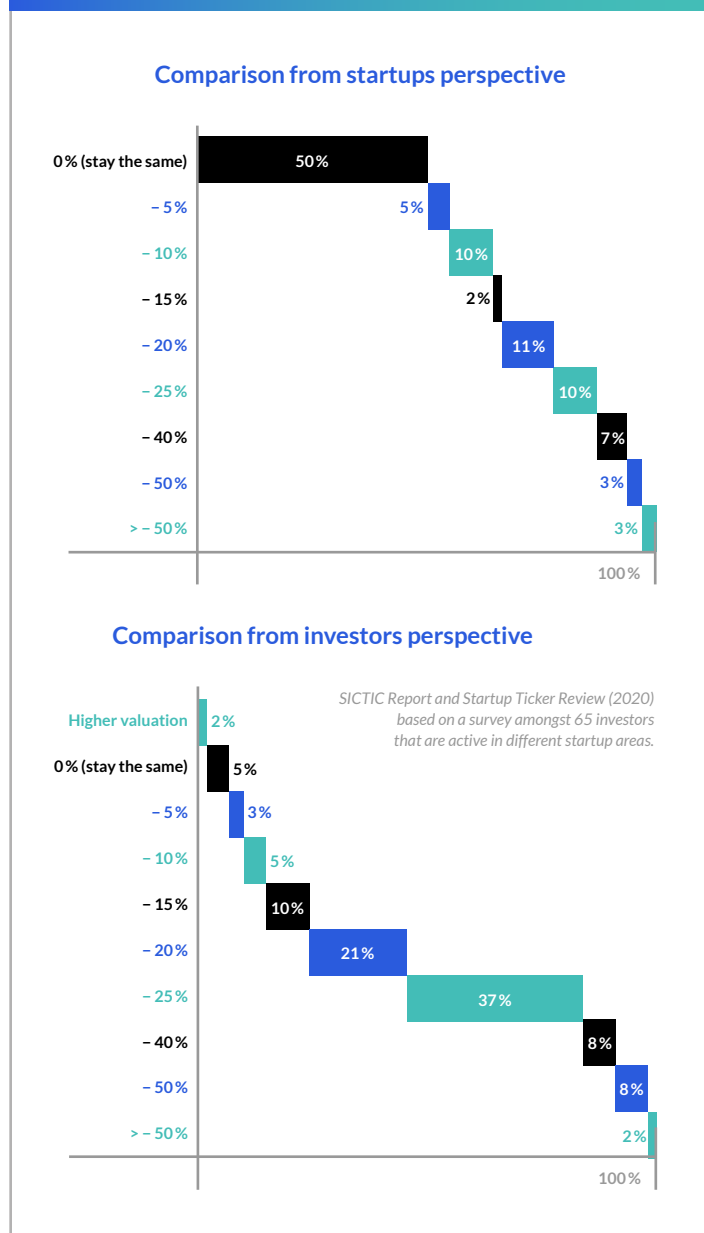
– Money costs more, negotiations with investors will certainly be harder and the value of startup might decrease.

Startupticker published an interesting report by SICTIC, summarized in their newsletter from May 1<sup>st</sup>: “This week we published the [results of a survey of business angels by SICTIC and Business Angels Switzerland](#), in which 50 % of business angels say they will invest less or not at all in startups. Things look a little better for companies in which angels are already involved.

Due to the increased competition among startups for venture capital, angels expect a decrease of 20% to 25% in valuations. SICTIC president Thomas Dübendorfer assesses these results in our interview and gives some startup tips. The conclusion is clear: **Startups have to learn to make do with less money.**”

The Innovation Monitor survey asked the same question to the startup and compared the results to the investors’ responses in the SICTIC survey (Figure 5). There is a large discrepancy between both: investors expect a decrease in valuation, 58% of them seeing a -20% to -25% decrease, whereas 50% of startups think their value will stay the same. This may be explained by the uniqueness of the cleantech sector compared to the ICT sector in focus in the SICTIC survey, or that there is a difference in terms of expectation and understanding on how trends will evolve. It might be a risk that startups have to consider in their next fundraising round.

Fig.5 – Impact of the COVID-19 crisis on startup’s value



A few months after the start of the crisis, what is the situation?

Startupticker and Swiss Private Equity & Corporate Finance Association published the [Swiss venture capital](#) report in July 2020, which gives a first impression of the situation on the investment side (all sectors considered). The report states that:

- For the first half of the year: “The total amount invested fell by 36% compared with the same period in 2019. This decrease is due exclusively to the lack of mega-financing rounds in the three-digit million range”,
- “The majority of startups were able to attract more money in 2020 than in 2019. At CHF 3.9 million, the median investment is a good 20% higher than in the previous year.”,
- “The sum generated in 2020 is high in a long-term comparison – at about 67% above the comparative value in 2018”.

The report explains that the COVID-19 had an impact: “Until now, foreign investors and foreign companies as buyers of Swiss startups have played a major role in this country, but the corona crisis has significantly reduced the importance of both. Swiss VCs have jumped into the gap. Their share of total capital invested has risen from about a quarter to half”.

Startupticker and Swiss Private Equity & Corporate Finance Association show in the report that Switzerland seems to be in a good situation compared to other countries. As an example, the number of investments in the first half of 2020 in northern and western Europe decreased by 40% (compared with the same period in 2019). This is also the case for the total amount invested, which decreased by 18%. The report explains that the increasing activities of business angels clubs, as well as existing and newly launched VC



funds, have led to a high number of financing rounds (+20%), and are responsible for this very good dynamic.

The report shows that the situation seems to be more positive than initially expected as investors have continued their investment activity almost unchecked during the crisis. It is interesting to note that fund managers expect delays in fundraising, but do not expect to raise less than planned.

In their newsletter from August 6th 2020, the Cleantech Group published interesting insights regarding investments in the cleantech sector at the international level. The Cleantech Group did not notice an effect of COVID-19 on the second quarter of 2020 cleantech investment. It might be that many deals closed in the second quarter were initiated in the previous quarter. A consequence could be that the impact of COVID-19 on deal-making could be felt in the following two to three quarters. In the financial crisis of 2008, the fall in the investment numbers was very deep and immediate and lasted for two quarters. The pandemic crisis will be quite different. The Cleantech Group reaches the same conclusions for the second quarter of 2020 as the Swiss Venture Capital Report, that the impact on investment is very limited. In the cleantech field and at the international level, the second quarter had a greater deal volume than first, even reaching the most the group has ever recorded in a quarter. This corresponds to 636 deals for a total of 9 billion USD invested.

Overall, if a climate of uncertainty dominates, it seems that the impact on investment is lower than expected. Most of the experts agree that startups need to carry on their development. They however should be careful regarding the evolution for the coming months and limit their risks. Jordi Montserrat's recommendation summarizes well the situation: "I'm generally rather optimistic and a go-getter. However, my advice for startups nowadays is to be cautious, be prepared to endure through and to survive without any additional resources for the coming 8 to 12 months."

### What can we expect in the future?

The current COVID-19 crisis is not only a health crisis, it is also an economic crisis. There will be a need for massive public investment in various industry sectors and we have seen some countries already publishing recovery plans. But how green are these recovery plan going to be? Will public investment be associated with climate and environmental targets? Is there an opportunity for cleantech startups to benefit from these recovery plans?

The OECD and many experts are clear on the fact that "a green recovery will significantly enhance the resilience of economies and

## The European Green Deal

The European Green Deal, as proposed by the European Commission (EC) at the end of 2019, is a new growth strategy that aims to transform the EU into a fair and prosperous society, with a modern, resource-efficient and competitive economy where there are no net emissions of greenhouse gases in 2050 and where economic growth is decoupled from resource use.

The European Green Deal is at the heart of the EU's strategy to drive the economic recovery from the COVID-19 pandemic, in particular through Next Generation EU, the 750B Euro recovery instrument announced in May 2020.

Reaching the targets of the European Green Deal will require action across all sectors of the economy, including:

1. **Decarbonising the energy sector** through renewable energy projects, especially wind and solar, and kick starting a clean hydrogen economy.
2. **Investing** in environmentally-friendly technologies.
3. **Supporting** industry to innovate.
4. **Rolling out cleaner, cheaper and healthier forms of private and public transport.**
5. **Ensuring buildings are more energy efficient and supporting the circular economy.**
6. **Working with international partners** to improve global environmental standards.

societies in the face of both the severe recession and accelerating environmental challenges. And we are in a situation where many governments have included "green" recovery measures in their

policy packages designed to address the short-and medium-term socio-economic impacts of the pandemic”. However, and unfortunately, the balance between green and non-green spending is so far not favorable in terms of the volume of support towards positive environmental outcomes.

In [an article published September 23<sup>rd</sup> 2020](#) the Guardian reported: “Few countries are living up to their promises of a “green recovery” from the coronavirus crisis, with hundreds of billions of dollars likely to be spent on economic rescue packages that increase greenhouse gas emissions”.

As an example, “The US is planning nearly 3T USD in spending with few environmental safeguards attached, and little money going to low-carbon efforts, while rolling back regulations that protect nature and the environment. Of the total US stimulus of about 2.98T USD, only about 39B USD is going towards green projects”.

The article also mentions that the UK, Germany and France are among the 20 biggest economies planning for a green recovery in which the benefits to the climate and nature outweigh the negative impacts. South Korea is another country outperforming many of its rivals in terms of a green recovery package.

Considering the green recovery plan in Europe, in addition to the fact that travelling is likely to be an issue for some more months or even more, it seems strategically much more interesting for startups in the cleantech field to focus on the European market.

## Conclusion

The results of the survey and interviews show that the COVID-19 crisis definitely has an impact on startups in the cleantech field. But it also shows that the impact is limited for two main reasons. First, startups profit from their agility to react and adapt more easily than other companies. The crisis adds uncertainty, which is something startups are used to managing. Second, sustainability and environmental issues have stayed on top of the agenda, which is confirmed by the green aspects of recovery plans, even if they could and should be more ambitious.

It was and still is a fear that investments in startups might drop, even if so far, this is not confirmed by the data. However, experts underline the difficulty to anticipate the consequences of the crisis and their advice to startups is to be careful about the coming months and to be ready to work with less. This is a general statement for startups, and there’s no reasons to think that there will be a difference between startups in the cleantech sector compared to others.

Europe is where recovery plans integrate the most ambitious climate and environmentally



focused funding. In addition, travelling is likely to be difficult for some more months, or even years, which makes far away markets more difficult to reach. This seems to make Europe the best market to focus on for Swiss-based cleantech startups in the coming months and years.

To learn more about recovery plans & investments

**The Guardian analysis**

<https://www.theguardian.com/environment/2020/sep/23/few-countries-living-up-to-green-recovery-promises-analysis>

**Vivid economics report**

[https://www.vivideconomics.com/wp-content/uploads/2020/10/201028-GSI-report\\_October-release.pdf](https://www.vivideconomics.com/wp-content/uploads/2020/10/201028-GSI-report_October-release.pdf)

**OECD article**

<http://www.oecd.org/coronavirus/policy-responses/making-the-green-recovery-work-for-jobs-income-and-growth-a505f3e7/>

**Forbes article**

<https://www.forbes.com/sites/donaldkirk/2020/07/14/koreas-reveals-new-deal-designed-to-boost-jobs-revive-sagging-economy>

**Startupticker & Swiss Private Equity & Corporate Finance Association**

<https://www.startupticker.ch/en/swiss-venture-capital-report>

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startups were interviewed by the Innovation-Monitor

A summary of the outcome of these interviews is presented below

**SmartHelio**

Govinda Upadhya  
CEO

[www.smarthelio.com](http://www.smarthelio.com)

How would you summarize your activity?

SmartHelio uses artificial intelligence to maintain a high efficiency of solar panels by detecting problems and failures. With sensors we find solutions to fix the problem and anticipate how the solar panel will behave.

What were the consequences of the COVID-19 on your activity?

✓ As we are a digital startup, we were able to adapt quickly. We used data from third party devices already installed to carry on with our R&D. Also, with our clients being at home and being more available online, we were able to do more marketing and spend more time "with them".

What measures have you implemented to respond to this crisis?

We changed our priorities and carried out pilot projects with our customers to understand the main weaknesses of our solution. We also used this time to conduct interviews with all stakeholders in the value chain to understand how our solution can affect them and improve our business model.

What advice would you give to cleantech startups to recover from this crisis?

Focus on customers first, since they are going through the crisis too and may no longer be able to afford the products we make. It is necessary to keep the contact and see how we might help them.

[aquama](#)

Willy Lionel Pomathios  
CEO / Chairman / Fondator  
[www.aquama.com](http://www.aquama.com)

How would you summarize your activity?

Aquama produces a unique disinfectant made only out of water and electricity. Our company aims at replacing chemical products with our natural solution which is biodegradable in just a few minutes. Our business model is to sell the machines that produce the solution and not the product itself. Those machines are listed on a smartphone.

What were the consequences of the COVID-19 on your activity?

✓ In three weeks we got the same turnover as the whole of 2019! The main challenge was to deliver to the many customers who ordered machines. We had to immediately rethink the way we were producing.

What measures have you implemented to respond to this crisis?

We had to hire a lot of people, including engineers. We are a rather local startup, so our activity depends on the evolution of the COVID-19 locally. We were lucky to have an antenna in Singapore, where we heard about this virus earlier than in Europe. We realized that the army, local authorities, society, etc. were not equipped to face a pandemic. What really helped us out was the possibility to anticipate the changes, and thus we started to get organised in January already. We also lowered our margins because the first goal was to disinfect everyone and not to make profit. For instance, we had a campaign with QoQa.ch, an online sales platform, to provide access to these machines to the greatest number of people while maintaining the cheapest price possible.

What will be the consequences in the medium to long term?

We gained one to two years of development and our new machines are already on the market. Miniaturized models (portable machines which fit in a handbag) have been developed quickly and are now in our product portfolio.

What advice would you give to cleantech startups to recover from this crisis?

We must keep the intrinsic agility of startups. It allows us to quickly develop solutions that are beneficial for society. If entrepreneurs keep this spirit and put their agility at the service of the common good, their activity can only work! Money must remain a means to the goal, not the goal itself.

[Solaxess](#)

Sébastien Eberhard  
CEO  
[www.solaxess.ch](http://www.solaxess.ch)

How would you summarize your activity?

At Solaxess, we are developing a technology to make solar panels more attractive and aesthetic (white or colored), so that they are no longer hidden but shown on facades. In addition, cells and connections are invisible and panels are customizable thanks to a nanotech film.

What were the consequences of the COVID-19 on your activity?

✗ It's very frustrating because we had finished development, the product was certified and we were ready to enter the market (which was waiting for our product). We should have received a machine from China on January 15 in order to start producing mid-June, however production is now delayed by 6 months. This machine should have freed us from all constraints related to subcontracting.

What measures have you implemented to respond to this crisis?

We had to stop the hiring of an engineer who would have worked on the machine. Staff hours were reduced to 60%. Our only solution was to stop for 6 months while waiting for the machine to arrive, thus we slowed down so as not to take any risks.

**What will be the consequences in the medium to long term?**

We do not expect a lot of consequences in the medium to long term as the solar panel market is booming. We have lost 6 months but afterwards it should start again and go in the right direction.

**What advice would you give to cleantech startups to recover from this crisis?**

I think the most important thing is to always have a plan B when you start creating a project and you are in the development phase. Looking for a more local development alternative could also help in such a crisis. You have to build your network in your field and, especially locally, businesses around you could help in a crisis.

### MagicTomato

Paul Charmillot  
CEO

[www.magictomato.ch](http://www.magictomato.ch)

**How would you summarize your activity?**

MagicTomato is a web platform for daily food shopping from local producers. It is an online market where orders are prepared with fresh products, and delivered during the day. We have a positive impact on the planet by, for example, using electric delivery vehicles and paying employees and our suppliers (the deliverers) fair wages.

**What were the consequences of the COVID-19 on your activity?**

✓ Demand quickly increased by a factor of 5. So we put in place structural and organizational adjustments. In particular we had to make some compromises, such as

stopping delivering the same day or lowering our environmental commitment for a more social focus.

**What measures have you implemented to respond to this crisis?**

We reorganized the logistics and operational aspects, and hired additional people to manage the organization and delivery. We also had to stop delivering in electric vehicles. We set up a win-win partnership with taxis, that were losing their activity, to allow them to make deliveries.

**What will be the consequences in the medium to long term?**

The general excitement around online delivery will calm down and therefore our activity will drop, but it will not return to where it was before the crisis. It did accelerate the development of home food delivery and the transition of some people to it (3% of food purchases in Switzerland are made online but this is increasing rapidly).

**What advice would you give to cleantech startups to recover from this crisis?**

As a startup, you always have to question your business model, ask yourself if you are really bringing a solution to society. Sustainability has come back in everyday discussions. Not necessarily with a focus of saving the planet, but for example on more concrete act as "accessing to local products". So cleantech companies should take the current situation as an opportunity to reposition themselves towards the real needs of the consumer.

### Äss-bar

Nadja Zehnbauer  
Marketing Director

[www.aess-bar.ch](http://www.aess-bar.ch)

**How would you summarize your activity?**

Äss-bar resells bakery food from the previous day which is picked up across cities. We have eleven branches in nine cities.

**What were the consequences of the COVID-19 on your activity?**

✗ We made 60 to 70% less sales, even if we chose ideal locations to be visible to our customers (students, tourists, etc.). We have low prices, which means that we only reach the turnover we need if we have many customers.

**What measures have you implemented to respond to this crisis?**

Since we do not bake our own products, but buy them from others to prevent food waste, we had to do a lot of communication around safety issues, such as ensuring that our cars were clean and that we always maintain a quality standard. We had to reduce our opening hours in order to lower costs and reduce staff hours. In Romandie our franchised partner closed because it was not financially feasible to stay open. We have set up a home delivery service, equipped employees with masks, and communicated a lot with employees and customers.

**What advice would you give to cleantech startups to recover from this crisis?**

The crisis has shown how quickly projects can be implemented. It is important to be positive in this situation, to be active and to be in a "What can we do?" spirit. We must create and develop projects with partners, and also have a network among startups to be able to exchange good practices and help each other.

**OrbiWise**

Domenico Arpaia  
CEO

[www.orbiwise.com](http://www.orbiwise.com)

**How would you summarize your activity?**

We develop advanced technologies for the Internet of Things (IoT) industry. Our main focus is on Low-Power Wide-Area (LPWA) radio technologies, which enable long-range connectivity (>10km in line of sight conditions) between gateways and low power devices, with

1 AA battery sufficient for multi-year operation in most applications).

We have also developed an innovative solution, based on these technologies, to monitor noise pollution in cities, in real time, that can also be used for various applications like gunshot detection in the US or crowd detection in the case of the actual pandemic.

**What were the consequences of the COVID-19 on your activity?**

✗ We were not much affected in terms of software development and customer engineering, but we were definitely affected in terms of sales, since our sales colleagues have not been able to travel to see customers and prospects. Also, all Industry events have been cancelled, which has an impact in terms of business development. Furthermore, some customers are more affected than others and less responsive, depending on the country or the sector : for example, we have customers focusing on the hospitality Industry which have been severely hit by the current pandemic.

**What measures have you implemented to respond to this crisis?**

Our personnel have been working mostly from home at all our sites. In order to support people and make them still feel being part of the Team, we have set up short morning video-call with the entire Team, which, in a sense, take the place of informal, coffee-time, gatherings at the office.

We started relying much more on digital marketing, communication and virtual presence, for both internal and external meetings.

We are definitely going to focus more on digital marketing and online business going forward.

**What will be the consequences in the medium to long term?**

In the short term, we will mainly face negative consequences in terms of work life or customer reach, but in the long term it could be beneficial for us. We believe it could accelerate the transition toward more IoT solutions.

Automation will become even more relevant in many activities in the future, which could be one of the lessons learned from the crisis.

**What advice would you give to cleantech startups to recover from this crisis?**

I am not sure I am in a position to give advice to other companies, since we are all learning in this new pandemic. I could probably suggest to focus more on digital marketing, virtual presence and, if this makes sense, on online business, even if it takes time and effort to change the core business processes of the company.

As much as this might be difficult to do in many cases, with the short-term challenges in terms of finances and sales, we should try to maintain focus on the long-term development of the Company, trying to develop great products and maintaining great customer relations in these difficult times.

**greenTEG**

Holger Hinrichs  
Sales Marketing

[www.greenteg.com](http://www.greenteg.com)

**How would you summarize your activity?**

GreenTEG develops energy and medicine products such as heat sensors for measuring body temperature, and for the photonics industry (laser) or building industry.

**What were the consequences of the COVID-19 on your activity?**

✗ In most of the projects in the energy sector, the sales have declined strongly. The market is very difficult. Building consultants are very badly affected by the crisis, as well as small independent businesses, and that has led to a drastic reduction of orders.

✓ The body temperature sensor got a lot of interest during the crisis and led to the development of a new product that was launched in June 2020. It's a body temperature test which is useful for corona prevention.

Right now we have a drop in revenue, but we were able to develop a specific product and a rise in sales is expected since we have a lot of pre-orders.

**What measures have you implemented to respond to this crisis?**

Some hiring (such as interns) was postponed and we applied for federal and cantonal credit. We also had to explore and enter into a whole new market to sell a newly developed product specific to this time.

**What advice would you give to cleantech startups to recover from this crisis?**

In a home office environment it's important to work on how to motivate your team and this may require a lot of efforts. Home office and digital methods should be part of the way startups work, to be ready in case of crisis. Obviously, a clear communication about new circumstances is necessary. You should also get contact information quickly in order to improve your marketing.

**Power-Blox**

Alessandro Medici  
CTO

[www.power-blox.com](http://www.power-blox.com)

**How would you summarize your activity?**

Power-Blox produces self-learning, autonomous and self-regulating technology that enables decentralized power control and storage within the grid. Moreover it combines different energy sources and battery systems ("The Internet of Energy"). Our technology is well adapted for developing countries.

**What were the consequences of the COVID-19 on your activity?**

✗ Support training that takes place directly in countries was cancelled. Contracts cannot be finalized because the signature is physically not possible.

✓ New client segments opened since hospitals often

have no electricity or no disinfection. Also, the crisis brings into light those needs, therefore partners are more likely to release funds. This period could lead to a great growth in many areas.

**What measures have you implemented to respond to this crisis?**

You have to have the products ready for the projects, but pre-financing is necessary in order to manufacture. Production was relocated to Italy, where 1 million products can be produced per year. In the future, the assembly should take place directly in the target countries.

**What advice would you give to cleantech startups to recover from this crisis?**

In Africa you should take care of financing and risk issues. Indeed other startups are better there and grow much faster. Contact with the authorities and with other CEO's is also very important. In general you should test very quickly and directly with customers and also test interest in purchase at different prices.

### Daphne Technology

Mario Michani  
Founder

[www.daphnetechology.com](http://www.daphnetechology.com)

**How would you summarize your activity?**

Daphne Technology is an EPFL spin off that mitigates air pollution in the transportation sector. Our nanotechnology reduces toxic pollutants (like nitrogen oxide and sulfate oxide) from exhaust gas, particularly in the marine industry. The solution prevents damage to ecosystems and human health.

**What were the consequences of the COVID-19 on your activity?**

✕ We had to slow down the development of the product during two months but now we are back in a normal situation. We had to face lots of delays from our suppliers and prices have also increased.

**What measures have you implemented to respond to this crisis?**

We still have to do a lot of development to be ready for the market, so we mostly put our activities on hold and we are waiting to see how the situation evolves. This market has a long horizon so it will delay our activity by a few months or a few years, but it will still return to a normal situation: transportation is needed around the globe. We also lost an investor and therefore applied for a crisis loan. Moreover we are thinking about another fundraising strategy for the coming years.

**What will be the consequences in the medium to long term?**

From a market perspective, we expect to be back to normal at the end of 2021. But we are still affected by the virus, as transport vessels have to adapt their navigation routes. We wait to see how things will evolve next year before changing our plans.

**What advice would you give to cleantech startups to recover from this crisis?**

In the startup domain the impact will be in the repercussions in the economic side. You should always be ready to have cash to survive for two years.

### Methanology

Gerhard Meier  
Co-founder & CEO

[www.methanology.com](http://www.methanology.com)

**How would you summarize your activity?**

Methanology is developing the next generation synthetic fuel based on renewable methanol. We use the carbon dioxide coming from farms or air, and transform it through a biocatalytic way with enzymes to methanol. Therefore we also want to produce a new circular economy system.

**What were the consequences of the COVID-19 on your activity?**



✗ We just started our business before the lockdown, so the third investor stopped its engagement. We had to find a strategy to manage the situation with fewer resources.

✓ But this crisis makes people shift their mindsets and realise what is important in our economy and society. We had a lot of feedback worldwide that people are interested and they supported us with small donations.

**What measures have you implemented to respond to this crisis?**

We applied for financial support. We had to stop development of our first prototype since materials were delayed coming from other countries like Germany. We tried to convince the government that Switzerland can take a leadership role to distribute and export this technology worldwide.

**What advice would you give to cleantech startups to recover from this crisis?**

Never give up. Find ways and solutions and put efforts where you believe it is right to focus. You need to have a strong emotional bond to what you do, to really fight the challenge we face with this pandemic.

### Swiss Precision Lighting

Ralf Stucki

Co-founder & CEO

[www.splighting.ch](http://www.splighting.ch)

**How would you summarize your activity?**

Swiss Precision Lighting focuses on an energy efficient precise light system to avoid light emissions and light pollution. We produce a light system adapted for sport fields, as well as other applications, that is very modular and adaptable.

**What were the consequences of the COVID-19 on your activity?**

✗ We founded our company last year in October. At the beginning of March we equipped the first sports field with

our product, but unfortunately our event with customers, partners, and investors to promote it had to be cancelled. You can talk about energy efficiency, but with light you have to show it. Moreover investors were supposed to come from foreign countries, and so it was not possible to meet them. Our supply chain was affected as well, because we cannot produce each part of our product in Switzerland and we want to be part of the "4.0 Industry" as we manufacture on demand. This made the situation also very difficult for us because of the longer delivery times.

✓ The canton of Fribourg has tried to help us and it gave us the opportunity to be more in contact with the cantonal authorities.

**What measures have you implemented to respond to this crisis?**

We changed our priorities and our marketing. Indeed before we were very focused on one type of light, for sports fields, which are projects for the long term. But now we are also looking for short term projects with different light systems to improve our sales.

**What advice would you give to cleantech startups to recover from this crisis?**

Discuss with others as soon as possible, talk about it. You need to admit handicaps, not knowing everything and talk with local authorities for instance. One of the learnings I got, is that we have a lot of resources nearby. Our supply chain issues have not affected us as much as others, but we really have to understand that cheaper is not better and that we need to produce locally and thus keep added-value in Switzerland. What we learnt from this crisis is that it does not stop at 60-70% of swiss production, but we really have to go above and work with regional companies. SMEs are not very visible in Switzerland, but with the crisis we were able to focus more on this and find suppliers or producers in Switzerland. This innovation and energy that emerged during the crisis should stay.

We also always questioned ourselves about the transport of our products. This is also something that the crisis brought us: we have experienced uncertainty, more questioning, and rethinking how we do business.