

INNOV'ACTION

Responsabilitas Quaterly Company Newsletter



Global crisis inspires innovative actions

Editorial

By Cyrille Champagne, CEO at Responsabilitas

In the light of the current covid-19 global crisis, Responsabilitas as always is focused primarily on safety first. With that in mind Responsabilitas has now committed itself to publish a quarterly newsletter related to innovation updates and the manufacturing sector.

It is our aim to produce a regularly distributed publication that is generally about main topics of interest to our customers and subscribers.

Additional news bulletins will be issued periodically to the members of our platform when hot topics arise, but for now we thank our colleagues and customers for their support over previous years and we continue to provide our services where possible in these challenging times.

Newsletters delivered electronically via email are offered on request. In the meantime, Responsabilitas sticks by its original motto "**make safe, make fair, make well.**"

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Lessons learnt from China

by Cyrille Champagne

When the coronavirus epidemic hit its peak in Wuhan during late January, China had to cope with an acute shortage of masks, medical equipment, and hospital beds to face the increasing number of citizens needing treatment. Wuhan was totally locked down and other Chinese cities started to implement similar strict quarantine measures.



Two months later, Shanghai is slowly coming back to normal life and resuming business as usual. This article will highlight the lessons to learn from China's experience as the pandemic currently is affecting Italy, France and Europe in general.

Question: What resources does it take to build an 1000 bed capacity hospital in 10 days?



China was recently able to build a hospital of 1000 beds within 10 days. The concept of this hospital was originated from a hospital in a similar size that was established in Beijing to fight SARS epidemic in 2013. However, as the current COVID epidemic keeps developing at a faster rate than SARS, the existing hospital was insufficient.



Doctors from other cities also answered the call and complete doctor teams came by train with the necessary equipment to support their exhausted colleagues. The Chinese nation as a whole was dedicated to standing up firmly decided to answer the call.

Question: What role did Chinese entrepreneurs play in answering the crisis?

A few seasoned Chinese entrepreneurs decided to leave their current projects to focus on developing solutions for the crisis.



Particularly impressive was the creation of a Wechat group that would share some information and resources on masks led by successful entrepreneurs. The people invited in the Wechat groups were from all over China and would share some information exchange about needs regarding masks and introduction to resources. Notably, documents circulated at the beginning of the crisis about the mask industry, medical requirements, different players and market size. Local governments would share their request for masks within this group, which could be up to 1 million masks initially. Entrepreneurs that would like to build a production line would concurrently get introduced to manufacturers. Contacts in Shenzhen would explain which channels could help to get the approval of a business license within one day, while it would usually take a few months to complete the full process under normal circumstances. Information was exchanged about standards for different grades of masks. Grants would be provided for the purchase of production equipment.

Production line with extra mask production capacity could be ready within a few days.



Hence, in a matter of days and following weeks, many companies specialized in the production of masks or medical equipment were created from scratch as a result of the crisis, production lines were built, certification tests conducted, etc.

One month after, entrepreneurs have answered most of the local needs of different provinces and the same entrepreneurs start to propose their extra-capacity to other countries in desperate need such as Italy.

When the situation resumes to normal, companies will come back to their initial ventures but for now, their focus is based on answering this pandemic.

Call for digital technology & innovation to fight the pandemic



China's leadership also encouraged the use of digital technologies such as big data, artificial intelligence, and cloud computing to better play a supporting role in epidemic monitoring and analysis, virus tracing, prevention and treatment, and resource deployment.

There are many instances where digital technology is helping to fight the pandemic. For instance, a hackathon was organized with the title "Hack for Wuhan" supported by various startup communities and incubators all over China. In Shanghai, there is a smart city to follow the cleaning status of buildings, an app on the mobile phone allows us to identify where the most recent virus cases are located. Chinese tech companies such as Tencent and Alibaba have developed e-learning solutions for students confined at home, etc.

Question: What is the true meaning of Corporate Social responsibility in time of crisis?



In the current period of crisis, social responsibility of any corporation lies in how to find ways to collectively combat this situation.

In that respect, the combined spirit from Chinese entrepreneurs is indeed admirable. The delivery and speed of safety products production allows them currently to support European countries with masks and related equipment.

As coronavirus has expanded to France and the rest of Europe recently, LVMH is converting its perfume factories to make hand sanitizers for hospitals. This is now fast becoming the benchmark example for similar industries to follow.

Responsabilitas is following the example from such Chinese entrepreneurs and companies, therefore inviting all our fellow corporations from Europe to make the bold move of solidarity to help solve this unprecedented crisis.

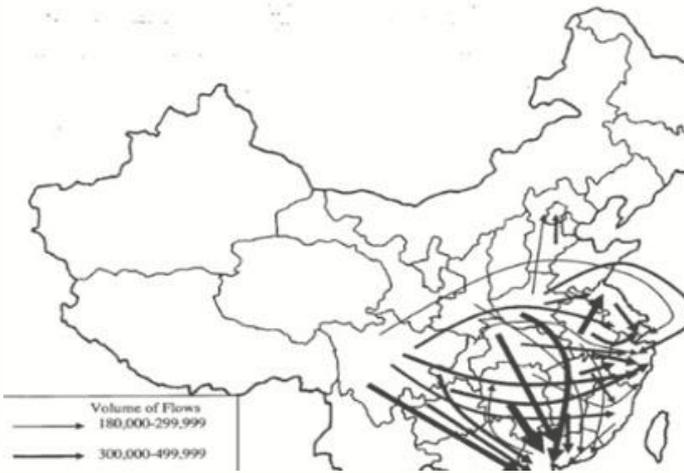
“UNITED WE WILL WIN”

“UNIS, NOUS VAINCRONS”

“UNITI VINCEREMO”

“UNIDOS VENCEREMOS”

“团结定能胜利”



Coronavirus impact on supply chain

by Cyrille Champagne

Studies estimate between 250 to 300 million of the migrant workers floating population ebbs and flows every year from inland China to coastal manufacturing cities in provinces such as Guangdong, Fujian and Zhejiang.

Every year, a few days before Chinese New Year, migrant workers will generally take the train or the bus to return to their hometowns. They are willing to work all year for this customary national holiday, which will enable them to spend quality time with their families, perhaps children left at home and visit other relatives. Usually they will celebrate with fireworks and handover red envelopes.

Some of these migrant workers will even settle in their hometown for a few weeks before coming back to the factory they left but others sometimes decide to change the factory or simply stay in their hometown. Hence, this period after the Chinese New Year has always been a critical time for factories as they need to look for new workers. Turnover is significant and can often reach around 30% in many factories.

Recruitment challenge in coastal provinces was already getting harder year on year because the trend is a reduction in the overall volume of migrant workers. Migrant workers had been enjoying increased job opportunities inland, possibly even in their hometowns, where minimum salary levels have been steadily rising.

Factories had to develop some strategies to keep experienced workers and to recruit new workers. They sometimes would rely on social aspects; for instance, one workshop supervisor who came from a town of the province of Hunan will try to lure his relatives or friends to join this factory the next year. The consequence is that sometimes a significant portion of the workforce comes from the same area, speak the same dialect, share similar appetites for the food, which is good for the social cohesion within the factory.

What has changed this year?



The first challenge from the factories was to establish a sound health and safety management system that follows local requirements in terms of hygiene, cleaning, temperature monitoring, availability of masks etc. so that they could obtain the authorization to re-open as early as possible.

Many factories operate like a small community. Migrant workers usually stay in a dormitory adjacent to the production building. So, once you have established a sound management system and workers are quarantined when they arrive, it is likely that you can operate in a safe way. Workers could spend their time within the factory boundaries in workshops, dormitory, canteen, and recreational areas.

The second challenge for factories, which is more difficult this year, is to recruit new workers. Factories, where the workforce or management comes from Hubei province, are the ones the most impacted as these workers can't leave the province yet. However, other factories are logically impacted with strong competition for labor resources.

Indeed, migrant workers are likely to postpone their return because their children have not yet resumed education are anxious that their traveling could not be safe or could be more expensive if they are quarantined along the way back.



Hence, local governments have actively stepped-in and are providing support for the transfer of workers between provinces so that factories could resume activity as soon as possible.



Before that, the first factories to resume operations were those producing masks, protective clothes, temperature monitoring devices, etc required for the fight against the coronavirus. The first difficulty was to facilitate the employees' return to work then to have a sufficient quantity of raw materials. Nowadays, with the support of the government, the process to obtain a new production license is facilitated, grants can be obtained to purchase production line and many Chinese entrepreneurs are looking into it. China's production capacity for such equipment is likely to rise very fast.

For other industries, a growing percentage of factories have resumed work, but some raw materials suppliers may be still missing. Manufacturing supply chains are complex and interconnected. To produce a product in one factory, you may require dozens of suppliers. If one component supplier is missing, you may not be able to produce the finished product.

This is the reason why supply chains in Vietnam or worldwide are also impacted: many components come from China.

How purchasing offices are impacted?

Chinese New Year always had a strong impact on the manufacturing supply chain. Orders that could not be completed before Chinese New Year would be postponed for about one or two months. Purchasing offices were usually using this time for in-person training of their teams or for improvement of company processes. However, this year in-person training could not be organized like before.

This year, it became essential to follow critical projects to make sure goods can be shipped timely. While efficient production planning follow-up is a must, Quality Control remains an important aspect. Indeed, as worker turnover is likely to be more significant than in previous years, quality checks are essentials.

Difficulties faced by purchasing office is that their teams can no longer visit the factories by themselves as conveniently as before since staff would face quarantine when coming back from certain areas. This makes sense, if one staff gets exposed, the whole office activity would be impacted.

Purchasing offices try to overcome these difficulties by minimizing their travels and organize inspections by local QC when it is really necessary for critical projects. They would rather choose local QC workings in those areas. Factories are indeed worried because of the risk of infection from visitors so they want to have visitors coming from the nearby city and who avoid public transportation.

Advices for purchasing offices

The advices we could provide to purchasing office are the following:

- Work together with your suppliers in order to resume production work as soon as possible. Your orders are essential to restart the economy.
- Emphasis on communication with your suppliers and pay special attention to production planning follow-up.
- Limit the transportation of your teams and avoid in-person meetings as possible. Use technology for efficient communication with flexible office or home-based working arrangements as required.
- For your key projects, it requires partners to provide local QC resources whenever possible.
- **Contact us** if you have any questions or needs for QC in China, Taiwan or Vietnam.

What is the true meaning of Corporate Social Responsibility in time of crisis?

- In the current period of crisis, social responsibility of any corporation lies in how to find ways to collectively combat this situation.
- In that respect, the combined spirit from Chinese entrepreneurs is indeed admirable. The delivery and speed of safety products production allow them currently to support European countries with masks and related equipment.
- As coronavirus has expanded to France and the rest of Europe recently, LVMH is converting its perfume factories to make hand sanitizers for hospitals. This is now fast becoming the benchmark example for similar industries to follow.
- **Responsabilitas** is following the example from such Chinese entrepreneurs and companies, therefore inviting all our fellow corporations from Europe to make the bold move of solidarity to help solve this unprecedented crisis.

Interview

In our efforts to contribute to collectively solving the ongoing global crisis, Responsabilitas strives to keep its finger on the pulse and relay to our subscribers what is the current situation on the ground in China. Responsabilitas team has been recently interviewing emerging innovators within the face mask industry and posing related questions regarding the contemporary issues that revolve around mask production in China since the covid-19 epidemic began up to present. From the establishment of a startup to the logistical supply chains required and the concurrent final quality control elements associated, responsabilitas digs deeper into what is the existing status quo.



SPECIAL ISSUE : MASK INDUSTRY

Interview with Hao Shi, co-founder of BREEZ, a Chinese-Switzerland startup



Our first interview is with Hao Xu, a physics bachelor from ShanghaiTech University. With an additional background in entrepreneurship and innovation, she is one of the core founding members of 'BREEZ'- a startup based on face mask evolution projects prior to the covid-19 epidemic.

CC: What are the key elements of your current mask designs and how do these differ from what is currently available?

HS: There are two main elements to our mask designs. Firstly we focus on the key functions of the particular model such as various filter options and user comfort factors. For example, after extensive market research, we concluded that many mask wearers have problems with breathing in general, the mask fogging up their glasses and also chafing on the ears from straps. This has been a compass for our R&D department to concentrate on.

Secondly, is the brand image of the mask itself. In this case, we recognize the younger generations want masks that look cool as well as protect your health so we have also been taking this into great consideration for our designs.

CC: How many members do you presently operate within your existing team?

HS: As with most startups we have a lean amount of staff in order to be efficient. I personally am spearheading the operation in Shanghai, whilst the main contingent of our company is based in Switzerland. Our CEO is from the luxury brand industry and oversees the financial aspects of our operations. Naturally, then we have our product design specialist and technical support engineer. Added to this we have our expert in HR and risk management. Together we all have the same belief that our products are the next evolution of pre-existing types that will give us a competitive edge moving forward in 2020.

CC: Is your startup currently associated with any larger corporations?

HS: 'BREEZ' has been working intimately with the Gebert Rűf Foundation since reaching the final round of an innovative design competition based in Switzerland. The foundation has provided workshops and funding to help develop 'BREEZ', thus giving better opportunities to enter the respective market.

"Health is the new trend"

HAO XU

CC: Are you presently seeking partners or other resources in your business endeavor?

HS: Whilst the Gebert Rűf Foundation has assisted us with our initial growth we still are embarked on a crowdfunding campaign to further increase our scope of development. We are always looking at new potential manufacturing sources for filter production plus connections to designers within the luxury brand industry. We believe the more options at our disposal, the better quality of service we can offer to customers.

CC: In closing then, what is the perceived launch time of your products?

HS: Our current projections estimate we will be handling mass production by June 2020. Mask demand is now predicted to exponentially increase through the coming year, hence we have an eventual target of 11th November, which is the biggest sales event of the year in China, with a complete range aimed specifically at a target customer base of 16-30 years old. Originally we created this project designed to combat respiratory problems associated with air pollution, but unexpectedly we found ourselves in a position to target a wider customer base; whilst still contributing to the fight against the most drastic pandemic within our lifetime. We have since coined our company motto, "Health is the new trend".

Interview with Guillaume Ferrand, a mask industry expert



CC: What is your experience? How did you end up working in the mask industry?

GF: It all started in 2005 when the French government issued a call for tenders to major distributors of personal protective equipment in order to build up a safety stock of masks in the event of a pandemic. Deltaplus, one of the largest world distribution leaders, won a fairly interesting part of the tender and it was in 2006 that I joined the company to take care of the follow-up of orders but above all of quality.

CC: Apparently, there are two different FFP2 standards, what about it?

GF: NF EN 14683 for surgical masks:

A surgical mask is a medical device. Developed according to standard NF EN 14683, it is intended to avoid the projection towards the surroundings of the droplets emitted by the person wearing the mask. It also protects the wearer against projections of droplets emitted by a person opposite. However, depending on the circumstances, it does not protect against the inhalation of very small particles suspended in the air and potentially carrying viruses. There are three types of surgical masks:

Type I: bacterial filtration efficiency > 95%.

Type II: bacterial filtration efficiency > 98%.

Type III: bacterial filtration efficiency > 98% and resistant to splashes.

NF EN 149 for FFP masks:

An FFP mask (for "Filtering Facepiece Particles") is an individual respiratory protection mask. Designed according to standard NF EN 149, it is intended to protect the wearer both against the inhalation of droplets and against airborne particles. Wearing this type of mask is more restrictive (thermal discomfort, respiratory resistance) than wearing a surgical mask but it protects against the inhalation of infectious agents. Shell-shaped, 2-ply, 3-ply, duckbill, with or without exhalation valve and with or without a face seal, there are three categories, depending on their effectiveness:

FFP1: masks filtering at least 80% of aerosols (total inward leakage <22%).

FFP2: masks filtering at least 94% of aerosols (total inward leakage <8%).

FFP3: masks filtering at least 99% of aerosols (total inward leakage <2%).

CC: What are the uses of these masks? In what type of environment are they used?

GF: A surgical mask is primarily needed to protect people around from droplets or postillions.

An FFP2 mask (FFP2 is the standard that has been adopted by the State in the event of a pandemic) offers powerful protection and allows healthcare personnel, for whom this mask is particularly intended, to protect themselves against sick people.

"I am worried about the newcomers on the market"

GUILLAUME FERRAND

CC: The “official” standardization procedure takes a long time but to be able to respond to the urgency of the epidemic, the European Union relaxed standardization measures on March 13th to allow more products to enter the European market. Can you tell us more about it?

GF: Everything's moving very fast. The derogation made on March 13th allows the importer to make a request to a notified body (bodies that can give the EC for a mask) who will look at the model and will be able to accept the mask on the European market even if it does not correspond to European standards. If the mask constitutes sufficient protection and is equivalent to an FFP2, it can be accepted on the market for medical use only, which means that this mask cannot be sold, it will only be offered to hospitals and will not be authorized to circulate on the European market.

CC: Today there are around 5,000 mask suppliers in China. What are the general quality risks that we can have on masks of this type?

GF: The quality risk lies mainly at the level of filtration. I am not worried about the historical mask manufacturers who have mastered their production, but I am worried about the newcomers on the market, who bought mask production machines and who have no means of control. They generally have no laboratories, they do not know the technique behind a mask, and so they start producing masks that don't filter much.

CC: Many people wish to send masks to their families and to hospitals in Europe. What are the main tips to give in order to be able to select the supplier correctly and the mistakes to avoid?

GF: Hospitals need FFP2, F95 masks. These masks are made to protect against fatal risks. They are technical and expertise is normally required.

My recommendation is first to go to historical mask producers and to avoid having them produced by novices. Second, when you find a supplier, it is important to check their certificates. These are easily falsifiable and therefore it is important to check or to have the documentation checked. If possible, it is best to go check the factory on-site and see if there is a testing laboratory.



CONTACT US

Responsabilas teams remain at your disposition for your consulting projects or audit projects, or to exchange with other industry professionals. Please contact us by email if you want to receive the quarterly newsletter or have any inquiries.

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