CATECAR INDUSTRIES SA

A SWISS PRIVATE COMPANY DEDICATED

TO BREATHABLE AIR DEPOLLUTION

CATECAIR™ ™:

a concept for depolluting breathable air

(PM, NO2, Ozone, CO2 and viruses)

Business Proposal

Catecar Industries SA is a Swiss private joint company with a capital of CHF 200'000 and equity funds of CHF 2'000'000 registered in Switzerland under cipher no CH-036.3.048.847-3 dedicated to depolluting mobility and Smartcitair™.

Catecar:

- has conceived and developed the first non-polluting/depolluting car exhibited at the Geneva International Car Show of March 2017;
- is starting the commercialization of depolluting urban ambient air products and systems named Catecair™.

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THE CATECAR VENTURE

1. THE CATECAR GROUP

The Catecar Group is currently a group of two companies founded and registered in Switzerland, respectively in August 2008 and October 2010: Catecar SA, the private company of the founders, and Catecar Industries SA, which is today the head holding of the Group. The aggregated fully paid capital is CHF 1'000'000.-, but much more funds have been invested up to today in the development of this venture.

For more than 35 years, Henri-Philippe Sambuc, a Swiss lawyer, has been involved in new technologies, start-ups and innovative ideas. Having several clients in the Middle East since 1982, he promoted in 2006-2007 new Swiss technologies in the field of high-speed trains, signing agreements with top Middle East groups. He became thus deeply aware of transportation, urban development and mobility needs and problems, in particular of the environmental challenges due to the fact that cars generate 45 % of CO_2 and up-to 70 % of Particulate Matter in urban areas. He decided to set up a team of highly skilled professionals sharing his vision and interested in developing a real alternative for individual urban transportation.

That's how Catecar was founded and the Dragonfly conceived: the first non-polluting and depolluting vehicle.

Then Catecar developed the Catecair™, a line of products depolluting PM,No2, Ozone and virus in the ambient air

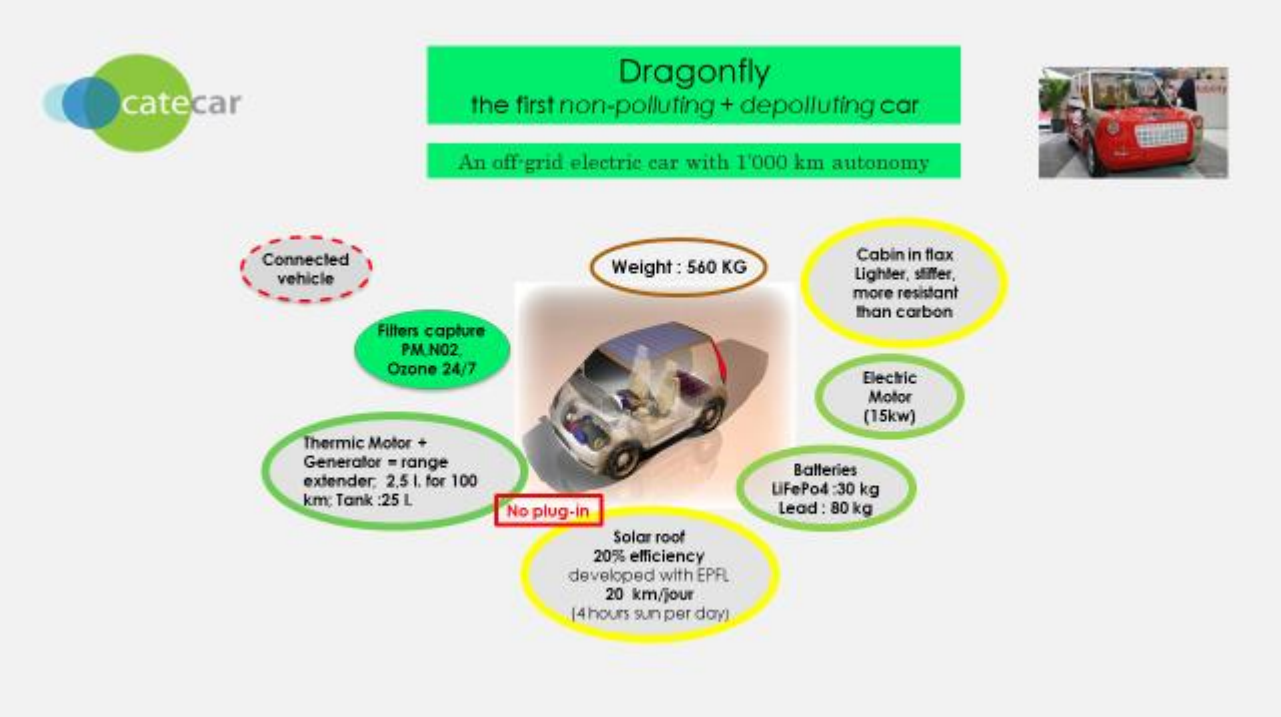
- to be fixed on the roof of existing cars,
- as on urban furniture, including in advertisement billboards in metros, stations and airports
- or protecting the individual quality of air for children and grown-ups.

The team (not included our suppliers and technical partners)

i. Henri-Philippe Sambuc, Swiss national, born in 1950, business lawyer, venture- capitalist and entrepreneur, founder and chairman of Catecar
ii. Walter Rickenbacher, Swiss national, born in 1962, engineer in mechanic, electronic and electricity, CTO of Catecar Group
iii. Nicolas Delay, Swiss national, born in 1970, industrial designer.
iv. Joël Sunier, Swiss national, born in 1967, solar specialist.
v. Aldo Bloise, Swiss national, born in 1972, engineer in IT and web system developer
vi. Joëlle Bloise, Swiss national, born in 1978, Ph.in Law, professor at Universities and cleantech advisor and expert

2. THE DRAGONFLY

The first depolluting car



Catecar first business aim was to launch a worldwide production, marketing and sale of Dragonfly, a clean and affordable vehicle, designed specifically for urban/peri-urban use and integrating first-class, Swiss high-tech technologies. The specific business model ("to produce locally for selling locally") allows in the same time a quick adaption to new technologies.

In other words the Dragonfly is a concept at the opposite of the dominant car industry: low capital investment (€ 5'000'000), small factories (15'000 m2, 8'000 cars a year with 150 workers, one shift), local sales (no big logistics).

The Dragonfly prototype is a 560 kg electric vehicle certified in M1, with a cabin in flax, a solar roof, an aspirator/filter of PM, NO_2, ozone and hydrocarbons capturing them around the clock, i.e. a cluster of Swiss high technologies for a new concept of mobility

The Dragonfly prototype was exhibited at the Geneva International Motor Show in March 2017 with great popular interest

The Dragonfly was presented to the Swiss President Mr. Schneider-Amman by Henri-Philippe Sambuc, president and founder of Catecar Industries SA

On March 9th 2017

In fourteen days of exhibition at the Geneva Motor Show of Geneva in March 2017, Catecar's booth received more than 15'000 visitors enthusiastic about the concept and technologies.

People from numerous 15 countries (among them Egypt, Ghana, Ivory Coast, Senegal, Zimbabwe, Cameroun, Pakistan, India, Lebanon, Jordan, Portugal, Italy) have expressed interest in manufacturing in their countries the Dragonfly as per the business model of Catecar "to produce locally for selling locally" (one line of production for € 5'000'000) representing a population of around 2 billion individuals living in cities and places where pollution and energy are daily key problems

3. CATECAIR™

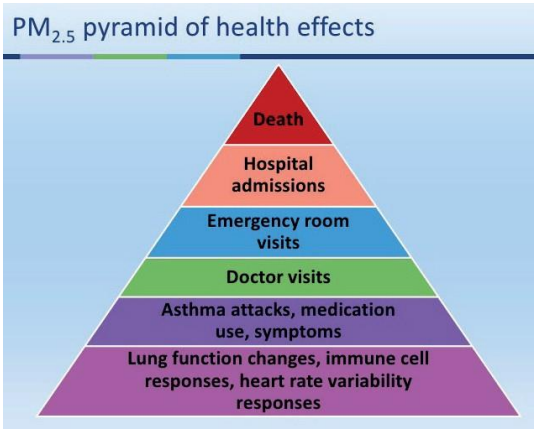
To-day however, Catecar has renounced to manufacture the Dragonfly and concentrates itself on the CATECAIR™™ products because time is of essence for reducing air pollution.

Before going through the Catecair™ products of Catecar which are all dedicated to air depollution, we have to explain the logic of *breathable air*.

3.1. The breathable ambient air

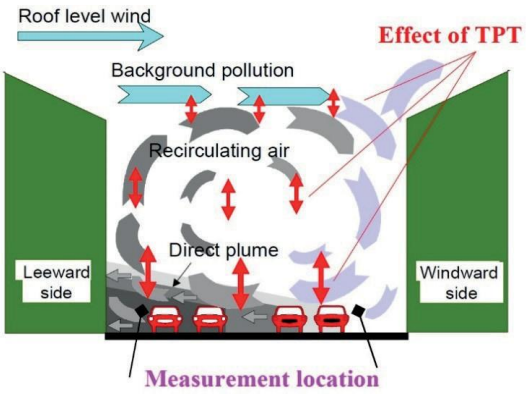
TO-DAY BREATHING IS RISKIER THAN SMOKING

PM is a very serious *health problem* for people, especially young people, because very fine (PM2,5) and ultrafine (PM1) PM poisoned lungs and blood with devastating long term damage to health. They say that PM kill 9'000'000 people worldwide in 2018. The health cost for Europe is estimated at € 150 billion a year because 56% of cities flout air pollution regulation. The EU Commission is putting a hard pressure on eight State Members which are not taking the necessary measures against air pollution: France, Italy, Germany, Great-Britain, Spain, Hungary, Rumania, Czech Republic and Slovakia, i.e. in term of population, the large majority of Europeans !



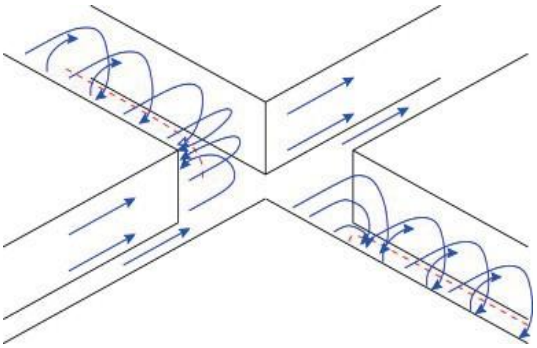
The level of PM is however much worse in low and middle revenues countries: 98 % of cities with more than 100'000 inhabitants do not meet the WHO recommendation. In other words: world population is more and more living in cities where PM pollution concentration is higher and higher. (http://maps. who.int/airpollution/)

To-day urban pollution has specific sources (building and heating, traffic and industry)

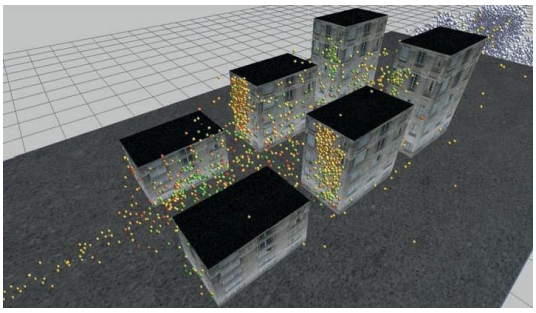


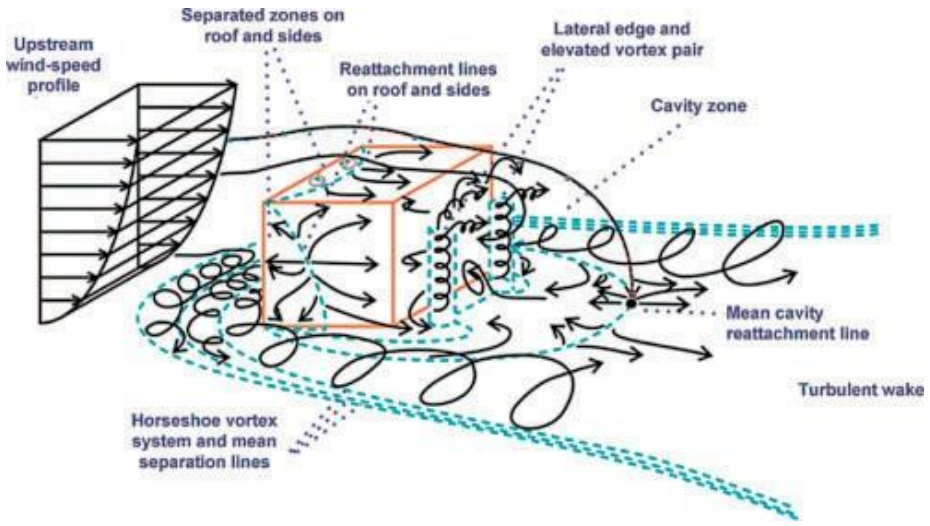
and general source (the air is polluted everywhere).

The main source for PM2,5/1 however in urban areas is the car/truck traffic. One estimate the proportion of urban traffic between 45 and 80 % of the said pollution, depending on vehicles, traffic density, topographical and weather conditions.



In a street, the air exchange is given by the roof level wind and street intersections which brings air and evacuates air. The air movement enters into streets and creates a 3-4 times circular movement retaining the traffic pollution down to the ground, mainly on the leeward side of the street. 95% to 67% of the pollution (depending on the ratio between the height of the building and the width of the street) is thus blocked into the street during a lenghtened time. It is this air flux rule that gives to Catecair™ the efficiency to absorb, at a rate of 300 m^3 per hour, 7200 m^3 a day, the PM 2,5 and 1.





3.2. CONCLUSION

Pollution remains down to the ground where we breathe, sometimes up-to seven days. This breathable air space has 3 m. high from the ground. It is there that depollution has to be organized. We have not to try to depollute air in general but to focus actions within the breathable air. Of course the regenerated breathable air will then be mixed with air over 3 m. But that depollution is not lost: first it is the maximum efficiency within the breathable space and then it betters air in general.

> ***It is indeed at ground level first that pollution, climate warming and diseases*** *swirl, fall, combine to rise, having reinforced each other, in a viral cocktail which penetrates into our lungs, then into our blood, all the more easily as our mucous membranes irritated by pollution are permeable and our lungs mothed by particle matters 2,5 and 1, the most dangerous ones. This is what recent studies show both in the USA[1] and in France[2] .*

The immense people and economic costs of the COVID-19 demonstrates that breathable air is the problem no 1 of our world. We have to clean air pollution, should we wish to avoid new pandemics COVID-20, 21 and so on. Pollution and impact of pandemics are linked. The more pollution, the more deaths, as shown by the mentioned studies. It explains why North of Italy has had so many casualties. That highly industrial region has the top rate of PM in Europe.

The more pandemic health impact = the more confinement = the more destruction of men activities and wealth. Should this vicious circle be repeated with the possible COVID 2020, 2021 and so on and we will face the science fiction literature describing the destroyed world (*The Road*, 2006, Cormac McCarthy).

Catecar has conceived Catecair™ products of different kinds but all of them with the same goal : to clean breathable air.

4. Catecair™ for cars

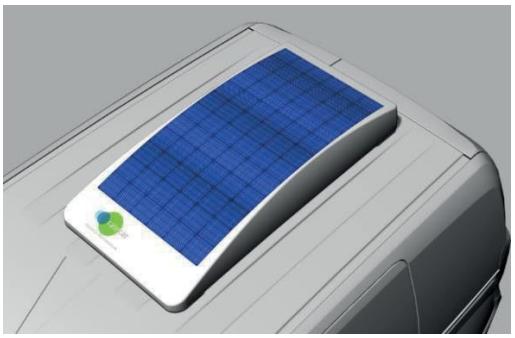
We have to use in first instance cars as a tool for depollution of the breathable air. Because cars are within this breathable air and because there are 1,5 billion cars in the world.

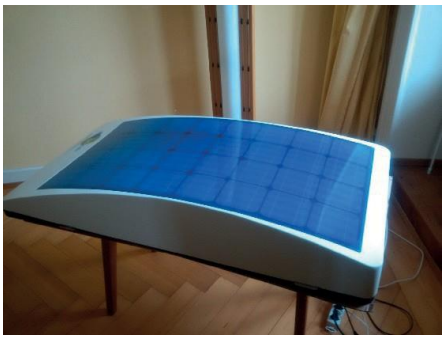
1,5 billion vehicles automobiles equipped with particulate matter, nitrogen dioxide, CO2 and / or viruses filters fixed on, or within, the roof of vehicles will compose **an army of depolluting robots**, cleaning at a bare minimum 300m3 / hour, 24 hours a day, for each vehicle which means per day,

[1] https://projects.iq.harvard.edu/covid-pm

[2] https://www.lexpress.fr/actualite/sciences/la-pollution-aux-particules-fines-peut-elle-servir-de-vecteur-au-covid-19_2122753.html

a volume of air regenerated for 500 humans. That the 90 million new cars sold each year[3] will be equipped with it and in 5 years a significant reduction of the level of pollution should be reached.

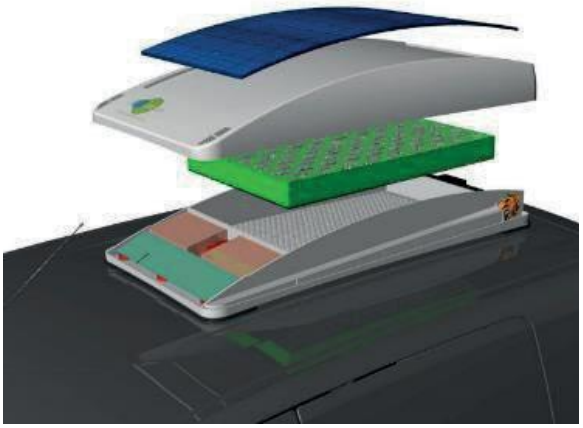




Beta demonstrator

Catecair™ cleans the ambient air of PM 0/2,5 and/ 1 at the rhythm of 300 m^3 per hour, 24/7 = 7'200 m^3 per day per cleaner, i.e. the air breathed by 500 people.

The solar panel measures 1000 mm × 500 mm, i.e. 0,5 m^2, generating an effective power per hour of sun of 72W when the system burns 10W per hour. This makes the system offgrid and autonomous as long as there are four hours of sun per day. In addition the Catecair™ is linked to the batteries of the car if and when needed. The system can be also recharged on-grid.



PM Filters and fan are ISO certified. Filters have a capturing efficiency of 90 % and fan pulse 300 m3 per hour. Special mixing of filters can retain different sources. of pollution (PM and NOx, etc.)**Solar energy:** 75W per hour of sun. Energy consumption for 24/7: 240W, i.e 4 hours sun per day makes Catecair™™ functioning a full day and night. **Maintenance:** change of filters as of pollution local conditions), i.e.every 15 months in principle in Europe, as per the level of pollution.

[3] Production till 2019, before the pandemic COVID-19 .

Natural ventilation (wind) does not reduce pollution but displaces it. Only artificial capture reduces pollution (Catecair™). Whatever the intensity of PM and al., the proportion of reduction is the same.

Day after day PM and al. will be captured at a rate of 7'200 m^3 per Catecair™, per day. And because polluted air is stagnant within towns and because PM has a lifespanofone week, the immediate benefit of capture cannot be denied, neither the aggregated depollution. What is uncertain at that stage will be the rate of reduction of the background pollution over time.

5. CATECAIR™™ ON URBAN FURNITURE

Our target is to complete the Catecair™ for cars by a network of Catecair™ on urban furniture. These two mobile and immobile depolluting robots fleets 24/7 is called Smartcitair™.

The Catecair™ on urban furniture clean the breathable air whatever the concentration of pollution and whatever the local conditions. Wind, rain, topography are not anymore so important. We have to install the fixed Catecair™ where pollution is known to concentrate: at the leeward side of the canyon streets and to spread the Catecair™ in the most appropriate locations of a city for mitigation of health deterioration (schools, hospitals, sport clubs, children play parks, public transport, abribus, etc.).

6. CATECAIR™™ FOR METROS, STATIONS AND AIRPORTS

6.1. General explanations

The air volume in an underground large area dedicated to mobility can be divided mainly into three different spaces:

a. the platforms or gates where passengers are waiting;
b. the transit corridors where passengers walk from point A to point B, with or without escalators or conveyor belts;
c. the waiting halls, cafés, commercial centers, shops, etc.

Each of these areas have a different pollution concentration. But it is demonstrated that metros, underground train stations and airports are seriously polluted, largely over the pollution which prevails on surface. All these areas have the canyon-streets type configuration, i.e a lot of obstacles which prevent ventilation to be efficient. That's why extraction of pollution is the way to improve the breathable air by filtering it.

Various concentration of pollution however does not impact the filtering itself but the rate of the change of filters', i.e. the extraction capacity for depollution is not given by the level of pollution but by the *volume of polluted air* in a certain area versus the *volume of air filtered* in that same area.

Ventilation spreads pollution and increases the mean polluted average volume of air. It makes depollution by filtering more complicated and onerous. The air of these areas must be in fact confined, controlled and not dissipated by ventilation. Polluted air in underground areas must be filtered in order that pollutants be extracted from air. Ventilation makes sense if some systems within the tunnels extract air for reducing the train polluted air movement effect (piston effect).

It has to be remembered also that between 1:00 and 5:00 am metros/trains/planes are not in service. During this period of time, underground Smartcitair™ cleans the stations, which means that at 6:00, when business starts, pollution is down at a largely reduced level.

Stations

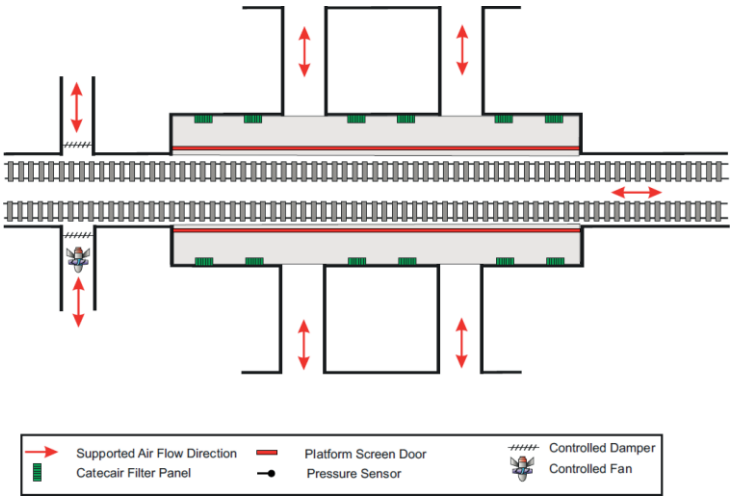
The filters used by Catecar in its Catecair™ are extracting ***fine and ultrafine PM, NO2, ozone and hydrocarbons.***

Usually an underground metro has stations with the following dimensions: 90(l) x 14(w) x 7(h) = 8'820m3. With a filtering capacity of 300m3 per hour, 2 x 6 Catecair™ on the 2 platforms of a station, the filtering capacity ***per hour*** is 12 x 300m3 = 3'600m3, thus 40,8% of the station air volume. Each hour.

Efficiency of the Catecair™ on the platforms of the stations

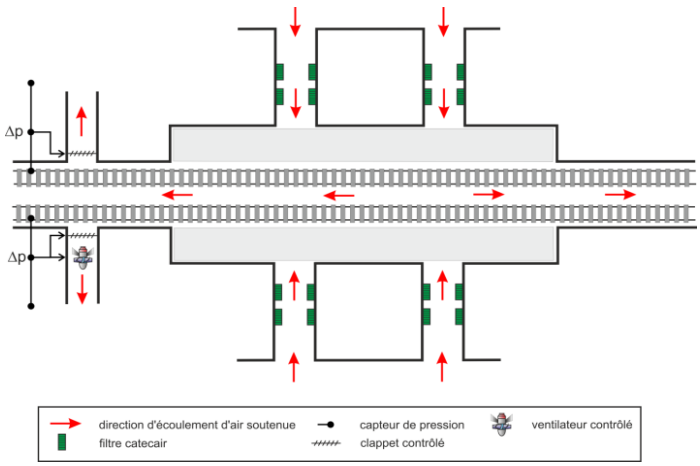
If we calculate the efficiency within the breathable volume for one platform (i.e. 90 meters long x 4 m of width x 3 m of height = 1080m3), the regenerated air volume produced during each 2' (the waiting time till the next train) is equal to 6 x 10m3 = 60m3, i.e 60'000 liters of air, which represent the volume breathed by 3'000 people in 2' (15m3 per 24hours = 10,5 liters per minute). In peak hours, the number of people waiting 2' for the next train is 1/10 of this number. It means that 100 liters of cleansed air is distributed per user.

It shows very clearly that the Catecair™ system is the most efficient way to improve the breathed air by metro users.



Efficiency of the Catecair™ in the corridors

Studies show that pollution in corridors is less concentrated than in platforms. If a corridor has a distance of 300 meters long (i.e. a volume of about 300 x 3 (w) x 4(h) = 3'600m3) 4 Catecair™ at 300m3/h. should inject every 5 minutes 100m3 of fresh air for 2'000 people.



Efficiency of the Catecair™ in the halls

Usually halls are the areas the closest from the surface. Catecair™ installations should vary as per the topology of the hall. Catecair™ flux of clean air should be, as a principle, directed towards the corridors and stations in order to create a cleaner natural ventilation from outside to inside, the air flux locking the cleaned air inside the halls and corridors.

6.2. The Advertisement Billboards

Digital out-of-home (DOOH) is the segment of publicity in public areas which grows, especially with the newly developed programmatic publicity. Metros, stations and airports are the locations where these advertisement billboards flourish.

Catecair™ can be integrated into these billboards or added to them. The existing park represent dozens of thousands of such billboards.

We have thus proposed to companies acting in that field to use Catecair™ concept as an added value for the public concessionaires and the advertisers. Several ones have shown interest and we are preparing a first demonstration in Paris.

7. CATECAIR™ FOR INDIVIDUALS : 0neto0ne

7.1 General comments

Pollution, climate warming and diseases are to-day the invisible enemy working into our body and each of our organs. This murderous cocktail penetrates into our lungs, weakens them and then destroy them, goes into our blood and brains, all the more easily as our mucous membranes irritated by pollution are permeable and our lungs mothed by particle matters 2,5 and 1, the most dangerous ones. This is what recent studies show both in the USA[4] and in France[5] .

The immense people and economic costs of the COVID-19 demonstrates that breathable air is the problem no 1 of our world.

We have to clean air pollution, should we wish to avoid new pandemics COVID-20, 21 and so on : this is the concept of the Catceair™ for cars, urban furniture, metros, stations and airports.

But we have also to find solutions for individuals who want to take immediate actions for protecting themselves and their children and babies. That's the purpose of the Catecair™ OnetoOne.

7.2 Catecair™ OnetoOne

That's why we have created a filter (PM2,5, PM1 + molecular particles) which cleans the ambient air and creates a kind of **cleansed air helmet which protects the user, as third people.**

[4] https://projects.iq.harvard.edu/covid-pm

[5] https://www.lexpress.fr/actualite/sciences/la-pollution-aux-particules-fines-peut-elle-servir-de-vecteur-au-covid-19_2122753.html

This light box is equipped with **High end particle removal plus complete molecular contamination product line:** particle removal up to 90% removal of ePM1 particles as well as the complete range of Molecular contamination treatment. These filters are ISO certified.

The individual Catecair™ measures 18 cm x 5cm x 9cm and 1.8m3 of cleansed air is fanned every hour alongside and around the face of the users, i.e 30 liters per minute when an adult breathes around 10 liters per minute. Its weight is 150g. Catecair™'s fans and filters life is 10'000 hours, i.e. 3 years if you use it 8 hours per day.

The number one advantage of Catecair™ OnetoOne is that it has a better efficiency of a mask without being a mask. A mask :

- does not clean the air but it said to protect perhaps third parties when one is ill,
- has to be changed every three hours,
- creates a serious unpleasant feeling when you have to put it long hours,
- has to be produced at huge quantities for one single person,
- has to be destroyed after three hours of use, which means a huge need for production, distribution, collection after use, and destruction (it means the total cost of that approach is very high),
- becomes a source of pollution itself when re-used.

Catecair™ OnetoOne is ***a fresh air generator with a triple benefit:***

- ***the air breathed by the user is cleansed,***
- ***the breathed out air goes up, not in the face of third people and dilutes the virus.***
- ***OnetoOne cleans also the air in general in any closed area where people aggregate***
- ***lifetime of filters and fans is three years (with 8 hours of use daily)***

8. MARKETING STRATEGY IN GENERAL

Catecair™ products have the same ultimate function but concern different markets that we can divide in three groups:

- within public space: Catecair™ for cars, urban furniture, advertisement billboards, metros;
- for private and individual use : Catecair™ for strollers and individuals,
- for public servants: including doctors and nurses

The two products which are on the verge of entering into the markets are:

- Catecair™ for DOOH advertisement billboards with companies like Prismaflex International SA in France (manufacturer), Imecon in Italy (manufacturer) or Exterion Media in France (advertisement Agency);
- Individual Catecair™ OnetoOne

8.1. DOOH Business + Metro depollution marketing strategy

Marketing of the Catecair™ have already been initiated through a contract signed in May 2018 with a DOOH (Digital out-of-home publicity billboard) Manufacturer Company in France which has subsidiaries in 8 countries in Europe as in Russia, Canada, USA and South Africa: Prismaflex International SA (https://www.prismaflex.com).

That company is listed on the French stock exchange with a turnover of € 60'000'000 and 400 employees.

Exterion Media (the no 3 European Advertisement Agency) has asked Catecar to install a Catecair™ in rue Bonaparte in Paris, as a first demonstrator, for test.

Exterion Media is under negotiation with RATP in Paris for setting-up with them a joint venture with a first market of 2000 billboards. Exterion Media will propose to make them depolluting billboards.

But of course the current pandemic situation means that the business is down up-to 80% for now in the publicity business. In the same time the link between pollution and pandemic is demonstrated.

Catecar has thus a great opportunity to see its concepts retaining attention as regards Smartcitair™ because proof is given by the pandemic Covid-19 that action is needed urgently and massively, should we want to save our world from bankruptcy

8.2. OnetoOne marketing strategy

Once a 3D demonstrator done and tested (final choice of the power of fans and debit of air protecting the user) as regards cleansing efficiency and analyze of the fluxes of air around the face, Catecar will present the product to public authorities for protecting health servants, professors, police, etc. in order to get aggregated orders.

A social media campaign will be organized aiming at informing seniors of OnetoOne protection in order to avoid an illegitimate confinement of that fragile class of people in order to safeguard their personal freedom to move out without criticism.

9. PARTNERING

The flux concept of our product and the choice and supply of the filters are those of our air filtering specialist partner XXXXXX in……., Germany.

XXXXXX…is a very respected and creative company.

We have agreed on a joint-venture for developing exclusive special mixing of filters under the trademark "Catecair™".

10. PRODUCTION

The only part to be manufactured (molded or thermoformated) are the box, more or less big, depending on the type of Catecair™ (billboards or OnetoOne).

All other parts (fan, filters, batteries, electronic, etc.) will be supplied by existing providers.

We will thus not invest into a factory at the beginning but make the products assembled by a third party in a place fit for producing at the best price and quality. But it should be Swiss made for the Swiss market.