Interview: Ryad Dahmani – CEO, Cold Chain Vision, Switzerland

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19.12.2017

Tags: Switzerland, Cold Chain Vision, Logistics, Cold Chain, Ticino, STrategy, Internationalization

Ryad Dahmani, CEO of Swiss-headquartered cold chain logistics specialists, Cold Chain Vision, discusses the impact of new technology in the logistics industry, the importance of quality controls in the transportation of vaccines and why Cold Chain Vision is a name worth remembering for the future.

Could you please start by introducing Cold Chain Vision and your start product Tempinspect?

When I was working in Brazil, I noticed that data logging technology was unstable and that we needed to look for an alternative and more reliable product. As we looked, we noticed something very important: in the pharmaceutical industry, an industry worth over a trillion dollars a year, roughly 20-30% of revenue is lost every year to cold chain logistics. This equates to roughly USD 300 billion lost every year. If we take vaccines as an example, 25% of vaccines are lost in transport because they reach their final destination in a degraded state. This is largely because vaccines are very difficult to maintain and transport. The risks are not constrained to heat gain, but also if they go under temperature and are kept too cold. The latter is comparable to injecting dirty water into a patient!

The quality of current data loggers on the market often falls short. It is hard to find a good logger. When companies find a logger that works properly, they rightfully stick to it. Our solution was

therefore to come up with a logger that 1) would have much more memory than the average loggers on the market. Average loggers typically hold between 8,000 to 16,000 readings; our logger holds 30,000 readings. If you were to take measurements every 10 minutes using our loggers, you would reach 208 days of temperature recording. 2) We wanted a logger that is not only flexible in its programming and usability, but also that prioritizes on-the-go usability. You can take the logger and insert it into your computer, tablet or phone where you are then able to see full reporting with PDFs, graphs and charts. Alternatively, you can export to a CSV file and add it to your database.

This product became known as 'Tempinspect.' It uses high quality components such as the Digital Temperature Sensor from Silicon Labs and is easy to use. Tempinspect's advantage is its ability to program directly on the logger, and to program time intervals that align with the seven major temperature ranges used in the pharmaceutical market. You can configure the device directly via your computer, tablet or phone. Or, you can take the logger directly in your hand and program it. This way, the program runs immediately. I am pleased to announce that the technology is complete and has been certified recently; the market is therefore satisfied in our functional technology.

We recently launched these products at the CPHI fair in Frankfurt. It was a tremendous success and we received market interest thanks to its competitive pricing and high quality. We're having this conversation 10 days after the fair and we've made several contacts and have garnered interest in testing our products. We launched with two lines of products. The first is a single-use USB temperature data logger. The second is a multi-use temperature data logger. The multi-use logger operates for a minimum of 1-2 years depending on the frequency of readings.

Cold Chain Vision works in four different industries; fresh produce, meat, seafood and vaccines. How important are vaccines and life sciences to your business, and how do you see this evolving in the future?

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Vaccines are extremely important due to their popularity and use worldwide. We decided to enter the pharma world given the strengthening of regulation on the temperature control of products, notably vaccines. These regulation changes often cause huge losses of revenue. The continuous evolution within the industry has forced many clients to demand that their suppliers deliver goods with the help and information of data loggers. Previously, this was not possible.

With our technology, we make this possible by offering very precise readings. With average data loggers, there is a .5 precision point accuracy. With our data loggers we offer .1 precision point accuracy. Our higher quality of service, coupled with governments' demand for stricter regulation in the industry will lead Cold Chain Vision to generate more business in the future.

Let's take a look at 'vaccine segments'. In First World economies there is strong anti-vaccine feeling. This is forcing authorities to enact legislation about compulsory vaccinations. Have you noticed this and how do you see this movement impacting your business?

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The general tide against vaccines will not substantially impact our business because there will always be demand for vaccines. We believe our business will develop thanks to the growth in demand, from First to Third World countries, for quality control. Until recent years, quality control, particularly in developing countries has been less successful.

Nonetheless, there will always be the rebellious side to vaccinations, notably conspiracy theories. These theories are uncommon and derive from the notion that vaccines are not as healthy as claimed. If we are rational, and look at the history of society in healthcare, we see that they have helped and contributed enormously to healthcare.

Global spending on cold chain pharma shipments is growing at 8-9% per year. You have had your ear to the ground at CPHI in Frankfurt and are an active player in cold chain pharma. What are some of the emerging trends that you've heard? And, how will you adapt your offering?

The arrival of the fourth industrial revolution, the 'Internet of Things (IoT)', has changed the focus of companies. In the past, companies would center more on the logistics and the transportation of the vaccines; you would control the temperature of the vaccine from the moment it left the factory until it met the client; and as a result, the limitations of responsibility would be clear.

The arrival of IoT has made it possible to control temperature, humidity, light, vibrations and atmosphere from inside the factory. Technology has become the new focus. In this vein, our new goal is the development of a Bluetooth version of our logger which uses MESH technology. The Bluetooth logger will have a range of communication of 100 metres. However, the logger would not be limited to 100 metres. In a 500-metre-long warehouse, data loggers would be able to communicate with one another across the length of the factory provided they are within a 100m

range of one another.

Our final development (although in an inchoate, theoretical stage) is smart containers. We spotted a serious issue in sea freight cargos that led to investigation. When a container is ‘caged in,’ it is impossible to communicate with it and reveal its location because satellite systems cannot penetrate through neighboring containers. We intend to combat this problem by fabricating smart containers that communicate with one another, just like how Bluetooth technology works. Our idea is to have all Bluetooth tech, data loggers and different pharma products talking to each other seamlessly, creating their own network. By placing a container within proximity of another, it will piggy-back communication until picked up by satellite, whether it be GPS or GSM.

It’s good to hear about the tech developments, do tell me more about the commercial side. With the launch of new products now complete, what are the next steps?

We have conducted market research through communication with our clients worldwide. Thanks to CPHI, we have generated a certain buzz in the industry. In terms of pricing, we are 60-70% more competitive than our competitors. Our entrance into the market has come to be defined by this: we put data loggers on the market when our competitors are more expensive. This has brought us quick success. Brazil has already sent out a request for 3,000 loggers per month. Different parts of the world have also expressed their interest in testing our products.

What sparked your original interest in the life sciences world?

I was introduced to cold chain technology by a friend of mine. I’d always had an interest in the pharmaceutical industry and came to realize that there was a lot of potential to create new technologies. This tech would monitor pharma products that need to be in a temperature controlled environment. I investigated and was pleased by the technology, and saw that it had great market potential. We decided to represent this technology in Brazil to start with, followed by Switzerland.

Why Brazil?

I was living in Brazil at the time and found it logistically practical to explore the market there. Further, it is a vibrant and engaging market. Brazil has a population of over 200 million people so there is great potential to do business. That said, it is often complicated to do business there…

CCV is currently located in Ticino, the Italian-speaking canton of Switzerland. What made you choose this location?

My mother is from Ticino and I grew up in Ticino, so it is a very special place for me. I would like to give back to Ticino by creating a tech company that could be very successful and branded with the Ticino label. Of course, being based in Zurich or Basel (aside from the more international offering) would mean that our clients could participate in fairs to create market awareness and there are unlimited travel possibilities. It is true that would be easier, logistically speaking, to be in a central area full of pharmaceutical companies. That said, in today's high-tech world, Ticino is convenient. We have an airport providing easy access around Europe and the rest of the world. The choice to reside here was not strategic to the market; it was more of a personal decision.

Let's look at the international footprint of Cold Chain Vision. You are creating awareness in Switzerland and internationally. But why set up an office in Hong Kong?

To maintain a competitive price on the market, we decided to diversify our office locations. The engineering side to our technology has Swiss design and German-Brazilian product engineering. Our German engineers follow the production on site to ensure quality control. We decided to assemble the products in Shenzhen, China. The Hong Kong office compliments and follows the production in China.

What are the international ambitions? Where do you see the potential?

Distribution networks are key, especially in countries that are harder to reach. Secondly, trade fairs and events around the world will be important. Finally, pharma, food and other industry fairs that have cold chain uses will be of interest to us, too. We already have contacts across Europe, Asia and South America that are leads, clients and useful contacts in distribution. We are also in touch with key players in distribution across the world and within the cold chain industry. This will speed up our entrance into these markets.

You are part of an extremely competitive field. What sets you a part?

Quality. In every business I have been involved with, my focus has been quality of service. Investment into R&D is not an issue if the outcome is a quality product. The fact that we assemble in China and overseas, together with the components we choose, reflects the level of quality we strive for. Our temperature sensor, from Silicon Labs, is one of the best on the market. We consistently use the best components, ensuring our software and firmware are properly tested, all the while ensuring that we are as user friendly as possible. We will conquer the market through quality and price.

Amazon recently made the news as it is entering into pharma distribution in the US. What do you think could be the role of an SME such as Cold Chain Vision, in this climate?

Amazon is more of a food delivery service than pharma logistics. They are already extremely well-equipped to carry out distribution within their domain. Nonetheless, they also need to adhere to quality controls in the cold chain industry. The food world has their own regulations which are comparatively light compared to pharma regulations. These regulations are increasing; products like milk, cheese and meat have an easily degradable state if not properly transported.

Amazon is a good example of a pioneer in its delivery methods – they are beginning to use drones – and introducing new programs like Amazon fresh foods. In the future, we'd like to enter business with a company such as Amazon, a company with a similar focus to ours: delivering quality products at competitive rates.

Where do you see Cold Chain Vision in five years' time?

I am very ambitious in what I do, and I intend to make this business a success. In all previous businesses I have given 110% and have seen the reward. I dedicate a lot of time and a lot of passion to what I do, the emphasis being on passion, so I look forward to telling you in five years' time of the successes that Cold Chain Vision has had as a market leader.

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