Orbrix Conducts First-Ever Virtual Summit for First Responders in CBRN Emergencies

Orbrix Technical & Occupational Skills Training (UAE)—in partnership with Elifort Safety and Security Management (France)—held its first-ever CBRN summit in English last month for an international audience likely to be responders in case of a CBRN emergency. This entirely virtual, live event was called “CBRN Virtual Summit – Lessons learned during Covid-19.” It took place on 18 June 2020, started at 2:00 pm UAE Time and lasted three hours with about 148 Registrations, 80 attended participants from at least 25 countries. The event was also live-streamed on Facebook with almost 2.3k views.

Designed to help raise global awareness about the far-reaching social, medical and economic consequences of an event involving CBRN material and drawing lessons from the COVID-19 pandemic, and its consequences to the global economy and our daily lives, the summit focused on the importance of interagency and international cooperation in the response to biological threats and lessons learned from the COVID-19 crisis regarding the provision of specialized medical equipment and supplies.

Throughout the two panel sessions, the knowledge and experiences shared by the experts highlighted the need to build the capacity of first responders on CBRN emergency, convene meetings to share lessons learned and best practices applied during COVID-19 outbreak, strengthen the capacity of NGOs and media on effective communication with the public during a CBRN incident, and foster collaboration among
agencies within states and across states on CBRN issues. Another takeaway from the summit discussion is the recognition that all governments around the world ought to have demonstrated political leadership in responding to COVID-19 at the outset. Such a move will close weak links in the global effort in combatting the pandemic, mitigating risk, and recovering from the consequences.

Expert speakers of the Virtual CBRN Summit. (Source: Orbrix, 2020)

Expert speakers from around the world—UAE, South Africa, Canada, London, Ghana, France, and Nigeria—gathered online to share their unique experiences and insights. The panellists focused on successes and failures related to national and international partnerships, preparedness, medical infrastructure resilience, public response, and the role of scientists. The aim, thus, was to share lessons learned from the Covid-19 pandemic and identify how to apply them to CBRN preparedness and response.

In addition to the Opening remarks and Key Note address on the Theme of the Summit by guest speakers and event hosts, the summit was structured around one major presentation, two-panel sessions, a Fireside Chat and a Q & A session with the
Main presentation

1. You have great experience in biological and chemical weapons, but also the response to a major pandemic like the COVID-19 crisis. What is the ONE most important lesson you have learned in your management of such crisis?

2. Based on your very recent experience with COVID-19, what is the greatest priority, today, in planning for CBRN incidents?

Fireside Chat

1. The COVID-19 crisis in the UAE was quickly controlled and did not reach the wide-spread impact of other nations. Noting that Dubai and Abu Dhabi are major hubs for international travellers, What did you do differently to achieve such remarkable success, noting that?

2. What went well and what didn’t during the COVID-19 crisis response?

3. What lessons have you learned that could apply to a large scale CBRN incident taking place in the UAE or the neighbouring region. For example, a “Bio” attack could result in consequences similar to those of the corona virus emergency. Similarly, a radiological contamination event in the UAE could also reach transboundary proportions.

4. What do you see as the major common points, and differences, between the current COVID-19 crisis and a CBRN crisis?

5. How do you see the role of national and international authorities/organizations in the management of such emergencies? For example, do you think that the WHO, IAEA or other similar agencies should play a greater
role in establishing rules and standards in the way a country responds to such crises?

6. In many countries, we have seen major regional differences (within the country itself) on how the crisis was managed. Think of Italy’s Lombardy region in the early stage of the pandemic and an individual States in the USA. What do you think is the right way to manage such large scale crisis? Is there room for local authorities to decide how they will apply the restrictions and rules, or should it be centrally controlled? How would that apply in the UAE?

Panel 1: Importance of interagency and international cooperation in the response to biological threats. (Moderated by Dr Jeff Lafortune – Nuclear Engineer)

Expert Speakers:

- **Paul Butler**, P.Eng – International CBRN Expert; CBRN Response Specialist
- **Hubert Foy**, MSS – Director, African Centre for Science and International Security, Ghana
- **Douglas Ledingham**, MSc – former INTERPOL Assistant Director CBRNE

1. How important is interagency and international cooperation in response to CBRN threats and incidents?
2. Why would a CBRN incident in one country have impacts on others and require their cooperation?
3. In terms of interagency cooperation, what changes during a CBRN event compared to other conventional emergencies?
4. What has the COVID-19 crisis taught us that applies to CBRN threats and incidents?
5. One of the things we heard in the early stage is that “no one saw this coming”. Do you think this is true, and can we say the same about CBRN threats?
6. What aspects of the COVID-19 consequences can be related to the potential impacts of a CBRN incident?
7. What do you think is the best national agency to lead the response to a COVID-type crisis? What about a CBRN-related crisis?
8. Do we need to review our model of an emergency management system based on what we have seen in the COVID-19 crisis?
9. Is there an international body, like the WHO for the COVID, that advises in case of a CBRN incident? Do you think an international agency should play a greater leadership role?

Panel 2: Lessons learned from the COVID-19 crisis regarding the provision of specialized medical equipment and supplies. *(Moderated by Dr Jeff Lafortune – Nuclear Engineer)*

**Expert Speakers:**

- Pepijn van den Broek, M.Sc – National coordinator medical supplies and logistics for the corona virus crisis in the Netherlands
- Joanna Carter – Director Nursing for a large London hospital
- Dr Uche Anyanwagu, MD, PhD – Park Lane Surgery, UK

1. Can you give us one key success story and one major failing with regards to medical logistics in a major pandemic?
2. Beyond equipment and supplies, one of the greatest challenges may be the mobilization and deployment of qualified personnel. What is your view on that concerning a pandemic like the COVID crisis, and could this be an issue for CBRN incidents?
3. Based on what you have seen during the COVID-19 crisis, are we ready for a major CBRN incident?
4. If not, what do you think is the greatest priority?
5. Were medical personnel ready and trained? Would they be for a CBRN emergency?
6. If this happened again, what would you personally like
to have in terms of training, equipment, etc. to be able to better respond?

7. PPE was a major issue. Given the potentially much more complex forms of CBRN incidents, what do you think can be realistically done to better prepare for future crises?

8. Should the medical community play a greater role in the operational management of such emergencies?

9. Is there room for better international cooperation of the medical networks in response to such incidents?

Why is it important to learn from the current crisis? In her welcome address, Mrs. Charfaray, CEO of Orbrix, spoke on this issue: “As the COVID-19 crisis is entering a new phase, gradually and carefully returning the world to a ‘new normal’, we are slowly identifying lessons in global health crisis management that can and should help us better prepare for and respond to future pandemics. But viruses are not the only threat that could have international consequences; criminal acts involving CBRN agents could potentially lead to similarly severe health, social, political, and economic impacts, including incredible pressure on the medical infrastructure. Therefore, it is imperative that the lessons identified during the COVID-19 crisis be examined for their implication in other large-scale contamination events like CBRN emergencies.”

As the summit’s co-host, Orbrix is grateful to all its speakers and delighted that the UAE was represented by several notable experts. One of whom was Captain Ali Al Madfei of the Abu Dhabi Police CBRN Administration, who shared the lessons learned in the UAE, as well as its many success stories during the pandemic. Other speakers from the UAE included Mr. Peter Clevestig, biosecurity specialist & trained virologist, and Mr. Ahmad Al Shemeili, international CBRN expert and nuclear scientist.

Although this was the first-ever virtual summit on CBRN,
Orbrix promises that it will not be the last. Mrs. Charfaray made this point clear: “We plan to have many more lined up, on different interests of CBRN, including crisis management and disaster management.”

Looking forward to future CBRN summits,

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The International Space Station: a Case for Peace

In January, William Gerstenmaier, associate administrator for NASA’s Human Exploration and Operations Mission Directorate, announced that the White House intends to extend international space station operations from 2020 to 2024 as part of the 2015 budget request to Congress. He also said that NASA has talked to its international partners about this. The issue for everyone is coming up with the necessary funds to support the proposed extension. In Europe, many of the participating countries face financial difficulties and may rather be tempted to consider reducing expenditures for space activities. I am, however, confident that the European Space Agency member states will find a consensus and that the international space station will remain there at least until 2024.
Financial difficulties are by no means a new issue for the ISS. I still remember that 20 years ago, in 1994, when I took over the responsibility for the human spaceflight program at ESA, the European space programs were at a crossroads and Europe’s participation in the ISS in particular was under threat of cancellation. Estimates put the costs of the European Columbus laboratory at more than 1 billion euros ($1.2 billion). It should have been brought in several space shuttle flights to the station. This we had to change, so that Columbus as a whole could be transported by a single flight.

With a very committed team and within six months we redesigned the program and based it on the Columbus laboratory and the Automated Transfer Vehicle (ATV) as essential elements. The main contractor presented us with a proposal for a Columbus laboratory that was only half as large but still featured exactly the same experimental capacity as before. It could fit in one shuttle flight to the ISS and should cost about half of the original estimate. We were thus able to submit a proposal to the ESA Ministerial Conference in 1995 in Toulouse, France, that contained, in addition to Columbus, the ATV. This proposal was then accepted by the European ministers in charge of space.

Europe’s other partners in the ISS have not been better off. Every few years there was a budget crisis somewhere. While unity gives strength, it may also lead to hesitations and delays. The ISS once even survived by only one vote an attempt to cancel it in the U.S. Congress. Some tragic accidents led to additional doubts and threats. But each time the ISS successfully came out of the tunnel.

It is worth pointing out that the ISS not only made it through many programmatic changes, but also adapted itself to some fundamental reorientations in its very raison d’être. The ISS, like all its forerunner space stations, was a child of the Cold War, but it carried the DNA of human spaceflight from much earlier times. Before engineers even drafted the first
plans for Skylab and Salyut, visionary authors of the 19th century had already laid down their ideas about human spaceflight. Together with rocket travel to the Moon, a space station in orbit around Earth was one of the two recurrent themes in the early science fiction novels. But only the Cold War brought these dreams to fruition.

Lunar exploration and space station were closely interwoven ideas. One was the consequence of the other and political and technical developments affected them in reciprocal ways. As a result of the famous Sputnik shock of 1957 and the Space Race between the two superpowers that it triggered, lunar landings took the initial lead over circumterrestrial space stations. When the United States won the Moon race with Apollo, the Soviet Union turned its attention to space stations with the Salyut and Mir programs. Then, when the Apollo program was ended, the United States too turned its attention to low Earth orbit with Skylab and the space shuttle program.

Europeans too were galvanized by Sputnik. Everywhere, space activities developed. Europe quickly realized that national space projects alone would not be the right step to take Europe into space and that Europe could only achieve something meaningful if one could bring together all resources in order to work together. However, human landings on the Moon or a permanent human outpost in low Earth orbit exceeded by far the European capabilities. Both superpowers saw their roles in the respective human Moon and low Earth programs as a way to foster and demonstrate their leadership. Europe could only take, if at all, the role of a junior partner.

So the European countries cooperated among themselves in areas like science and technology, telecommunications, Earth observation, navigation, launch vehicles and human spaceflight, where they could find common interests and build up space programs that were characterized by balanced national leadership, compromise and consensus. At that time, such cooperation was not merely seen as a chance, but also
perceived as a burden for Europe; many observers looked with some envy at the United States or the Soviet Union, where things seemed to be that much easier with only one government to decide and one common language spoken among all stakeholders.

Things changed fundamentally in 1990. With the end of the Cold War, the concept of a bipolar world also came to an end. All of a sudden the balance of mutual interests, compromise and consensus became of growing importance in international relations and gradually replaced the former approach of only U.S. and Soviet leadership. The longstanding experience of Europe in cooperative space programs, mainly through the European Space Agency, suddenly turned from a handicap into an asset and a role model.

After the abandonment of Russian plans for a successor to the Mir station, in 1993 Russia became a major partner of the ISS. The participation of Russia was certainly the factor that stabilized the entire ISS program. Without Russia, the United States probably would have given up Freedom, as the Western space station was then known. But true collaboration on the ISS was only possible as far as consensus could be reached between the sovereign partners. The need to clearly define goals and expectations in the cooperative venture so as to avoid misunderstandings was obvious. Without the profound experience of Europe in mutually beneficial cooperation schemes and its influence on the other ISS partners, the introduction of Russia into the ISS partnership might not have worked so smoothly, if at all.

Nothing demonstrates better the progress that has been made on the long way from political enemies to reliable and mutually dependent peaceful cooperation partners than the astronaut training concept for the ISS. Since 1998, all European astronaut activities are merged in Cologne, Germany, at the European Astronaut Centre. There, however, not only European astronauts but all the other astronauts on the ISS –
Americans, Russians, Japanese and Canadians – are trained for their tasks with European laboratory equipment. In the opposite way, European astronauts go to Houston, Star City in Russia, Tsukuba in Japan, or Montreal to learn to operate the systems and components of the partners. This is part of the basic understanding between the international partners that any partner who owns a laboratory or another infrastructure element on the station trains the astronauts of all partners for it.

There is also a somewhat anecdotal example of the progress that has been made thanks to the ISS with regard to Cold War times: The third non-Soviet citizen cosmonaut to fly to a Soviet space station, then Salyut 6 in 1978, was the East German air force officer Sigmund Jaehn. The first non-American astronaut to fly on the U.S. space shuttle, with the ESA Spacelab mission in 1983, was the West German ESA astronaut Ulf Merbold. Coincidentally, at the time of their historical spaceflights, both astronauts had different passports – Jaehn came from the German Democratic Republic, Merbold from the Federal Republic of Germany – but both were born in the same region in the heart of Germany, at places that were only about 30 kilometers apart. After the fall of the Iron Curtain, Jaehn and Merbold found themselves working in the same space program, first for the Russian space station Mir and then for the international space station.

Ten years later, in 2001, ESA together with the other international partners received a letter from the King of Spain informing them that the ISS was awarded one of the most coveted prizes in the world, the Prince of Asturias Award, the highest prize in Spain, awarded yearly to a select number of personalities in different fields. The ISS won the prize in the category of international cooperation.

After 20 years of successful peaceful cooperation among the space agencies of the United States, Russia, Europe, Japan and Canada in this unique undertaking, time has come now to
consider the international space station for the highest award in this field on an international level: the Nobel Peace Prize.

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