Periodic Update – June 2015

This is the first periodic update on the Dr.One project. In February 2015 a Proof of Concept (PoC) for Dr.One in the Upper East Region of Ghana started. The PoC is funded by the Dutch Ministry of Foreign Affairs.With this newsletter we would like to inform you on the current state of affairs.

Aim of Dr.One

Dr.One aims to save the lives of people in remote areas by covering the last mile in health service delivery by using Unmanned Aircraft Systems (UAS). Dr.One focusses on the development, test, operationalization, production, maintenance, training and support of a robust and easy to use type of drone for the transportation and delivery of small medical goods.

Artist impression of a Dr.One System landing on a remote location

The Proof of Concept phase

The proof is always in the proverbial eating of the pudding; the intention of this PoC is to validate the concept of Dr.One. The goal is to mitigate risks and to develop a business case to the extent that initial funding for the next phases can be secured. Initial assumptions will be validated, both in terms of the overall Dr.One concept as well as the Dr.One systems. The intention is to test the prototype and validate through a PoC taking place in both Ghana and the Netherlands. Duration: from February 2015 until February 2016.

The partnership

The Dr.One partnership combines in depth knowledge and the network of the Ghana Health Service (GHS), the expertise of the United Nations Population Fund (UNFPA) as a worldwide leading Sexual and Reproductive Health and Rights (SRHR) health organization, the National Aerospace Laboratory (NLR) as an international renowned institute in aerospace and an Amsterdam Science Park based start-up IDI Snowmobile B.V. (IDI). Involvement of stakeholders such as the Ministry of Health, the Civil Aviation Authority and the Regional Government are a prerequisite the success of the Proof of Concept.

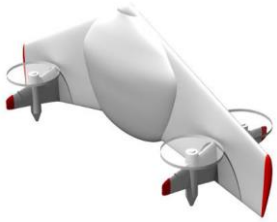
Kick of meeting in Ghana

In march 2015 the Dr.One PoC kick off meeting in Ghana took place. During a week the Dr.One project team spoke with many stakeholders such as the Director General of the GHS, the Regional Management team of the GHS in the Upper East

Meeting of the Dr.One project team at the Regional Ministry of the Upper East

Region and the Regional Deputy Ministry. The site for upcomming test flights was visited and GHS staff involved in medical, logistics and maintenace processes were asked for their input. During the visit the team learned a lot on the health system, the supply chain and the situation in the Upper East Region. Overall, the visit to the region provided highly useful insights in the context in which Dr.One should operate.

Development of the prototype



Dr.One systems are being specifically designed for health service delivery in remote areas in developing countries. Dr.One is a scalable design of low cost components, and e.g. can transport 2kg over a distance of 100km. Dr.One systems are capable of taking off and landing vertically, not requiring a runway infrastructure. It can also fly like a fixed wing and thereby cover large distances.

The system is designed to be: *operated safely and in an automated manner, without added infrastructure, by an app on a mobile phone; *highly robust and easy to maintain; *able to cover distances relatively quickly, in a relatively straight line, not hampered by bad road infrastructure. The first take-off/landing and social/local/medical staff acceptance tests in Ghana are aimed for in September 2015.

The GHS district hospital at Sandema is a location from which Dr.One could operate in the future

Desk research

A solid business model is required for Dr.One to be sustainable. A team of students of the University of Southern California (USC) made a start with building a model to calculate time and costs savings of Dr.One as an added solution for last mile delivery. The positive results of their efforts forms the starting point for a formal lean six sigma project, of which the outcomes are expected in September 2015.

Other initiatives

There are a few other initiatives in which UAS technology is tested for health service delivery. An overview of these initiaitives is maintained and linkage to these initiatives is sought by the Dr.One project team. E.g., with the UNICEF programme in Malawi that focusses on the use of UAS for transportation of lab sampels, a knowledge link has been established to learn from each others approaches, research protocols etc.

More information

Dr.One is a programme of the social enterprise ***Drones for Development***.
For more information, please contact:

Gerald Poppinga: gerald@dronesfordevelopment.com or
Mirjam Jansen op de Haar: mirjam@dronesfordevelopment.com