LAKE VICTORIA CHALLENGE

EVENT PROGRAM
29th—31st October 2018
Malaika Beach Resort
A GUIDE TO
The Lake Victoria Challenge
Trial and Symposium 2018

WELCOME LETTER
01
ABOUT THE LAKE VICTORIA CHALLENGE
02
THE SHOWCASE
03
PROGRAM OVERVIEW
04
ATTENDEES BY PROFESSION
08
DRONE COMPANIES
08
CHIEF GUESTS
11
SPEAKERS
13
DRONE COMPANIES
21
UTM COMPANIES
22
DETAILED PROGRAM
25
A GLOBAL ADVISORY BOARD
36
PARTNER ORGANISATIONS
38
SITE MAP
40
CONTACT LIST
42
I’d like to welcome you to Mwanza and the Lake Victoria Challenge Trial and Symposium. This three-day program reflects the region’s commitment to the innovative use of drones for civilian use. The transformative potential of drone technologies is expected to have its greatest impact in future African markets. The lower skies of Africa offer a relatively low access-cost aerial resource, representing a vital infrastructure leap that will give towns and villages (i.e. the urban and rural areas) access to development services like emergency aid, as well as commercial goods where current networks are lacking, with the use of modern digital tools.

This solution is a visionary, cyber physical system that incorporates robotics, artificial intelligence, digital printing and renewable energy for the development of economically viable and secure droneports. These technologies and their application in the region offers a platform for Mwanza to serve as an innovation hub, accelerating local entrepreneurship, industrialization and century job creation.

Mwanza has the conviction to become a gateway to the Lake Victoria Region, its economy and services. We have convened industry experts, thought leaders, entrepreneurs and authorities to discuss regulations, technology and unified traffic management and droneport infrastructures and services.

Thank you for joining us and bringing your expertise to our gathering. I am confident that this thoughtful exchange will help us achieve our vision for the Lake Victoria Challenge and pave the way for advancing sustainable growth, mobility and infrastructure in East Africa and the region at large.

HON. JOHN MONCELLA
Mwanza Regional Commissioner
ABOUT THE LAKE VICTORIA CHALLENGE

The people of Lake Victoria need to be connected. Better mobility infrastructure will allow for medical supplies, commercial cargo, and wider economic opportunities to reach those who need them.

The Lake Victoria Challenge (LVC) aims to improve the lives of the 30 million people living along these shores – the world’s most densely populated rural area – and anchor Mwanza as a gateway to the Lake region, its economy and services.

Drones offer a starting point for a radically new model of low-cost, fast and futuristic transportation that can provide rural towns and villages with access to modern services.

The LVC asks what could happen if Africa can unlock the lower skies as a resource for mobility.

The inaugural LVC event involves a symposium, expo, flying competition and a range of networking events. This unique event explores the potential of drone technologies to leapfrog Africa’s infrastructure deficit and address the continent’s public health and mobility challenges with a visionary, safe and scalable solution.

In what will be a multi-year stakeholder engagement program, activities of the LVC will promote the integration of UAS regulations, technology and infrastructure with the aim of fostering a commercially viable UAS market in Africa.

THE SHOWCASE

A three-day conference to discuss drone futures for the Lake Victoria region and Africa in general.

An expo to showcase drone innovations curated by experts in African use cases.

A challenge to address critical supply chain needs in the Lake region and to drive new.

Challenge categories inspired by real use cases

AERIAL PICK-UP
Drone teams pick up samples from remote health centers bordering Lake Victoria and flythem to the national testing center.

EMERGENCY DELIVERY
Drone teams transport an emergency shipment from the Mwanza droneport to a health center bordering Lake Victoria.

FIND AND ASSESS
From Mwanza droneport, drone teams identify markers for disaster locations and produce actionable georeferenced images.
# Program Overview

## Day 1

**Monday, October 29**

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<thead>
<tr>
<th>Time</th>
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<tr>
<td>08:00</td>
<td>Registration</td>
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<tr>
<td>09:00</td>
<td>Official Welcome Address</td>
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<tr>
<td></td>
<td>Mr Hanza Johani, Tanzania Civil Aviation Authority (TCAA)</td>
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<td>Ms. Bella Bird, World Bank Country Director for Tanzania, Malawi, Burundi &amp; Somalia</td>
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<td>Hon. John Mongella, Mwanza Regional Commissioner</td>
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<td>Hon. Isack Kamwelwe, MTP Tanzania Minister of Works, Transport &amp; Communication</td>
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<tr>
<td>10:00</td>
<td>Keynote 1: Advances in African Robotics &amp; Manufacture</td>
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<td>William Maluki, Head of Engineering, GearBox</td>
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<td>10:30</td>
<td>Keynote 2: Drones in the Lower Skies – A Vision for Africa</td>
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<td>Jonathan Ledgard, Founder, Droneport and Founder, Linnaeus, Visiting Professor, CVUT</td>
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<tr>
<td>11:00</td>
<td>Ignite Talks: Introduction to Flight Teams &amp; Technology</td>
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<td>FlyPulse, Wingtra, RigiTech, Singe, Wingcopter</td>
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<tr>
<td>11:30</td>
<td>Flight Demonstrations, Networking, &amp; Lunch</td>
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<tr>
<td>13:30</td>
<td>Plenary: Africa Updates &amp; Experience</td>
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<tr>
<td></td>
<td>Tanzania: George Mulamula, DroneX Cargo Trials, DTBI</td>
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<td>Rwanda: Wilson Kagoso, Managing Director, Locus Dynamics</td>
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<td>Judith Sherman Chief, HIV and AIDS, UNICEF</td>
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<td>14:30</td>
<td>Users: Medical Commodities – Challenges &amp; Opportunities</td>
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<td>Laurence Bwanaakuru, Medical Stores Department, Tanzania</td>
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<td>Matiko Machage, John Snow Inc.</td>
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<td>Helena Samsioe, GLOBHE</td>
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<tr>
<td>15:30</td>
<td>Tea Break</td>
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<td></td>
<td>*Hand-on UAS training session by Tanzania Flying Labs will begin at 15:30</td>
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<tr>
<td>16:00</td>
<td>Drone Regulations: New Paradigms &amp; Methods</td>
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<td></td>
<td>Harrison Wolf, Lead, Drones and Tomorrow’s Airspace, World Economic Forum Remarks from TCAA</td>
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<td></td>
<td>From Drone Mapping to Drone Delivery: The Technology, Operational &amp; Business Challenges</td>
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<td></td>
<td>Jean Christophe Zufferey, Co-founder, senseFly</td>
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<tr>
<td></td>
<td>Droneports: Costs, Benefits &amp; Business Models</td>
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<tr>
<td></td>
<td>Ben Savonen, RED team, Field Ready</td>
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<tr>
<td>17:00</td>
<td>Reception</td>
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<td>Welcome from H.E. Arthur Matti, Ambassador of Switzerland to Zambia and the EAC, Embassy of Switzerland</td>
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<td>18:00</td>
<td>Lakeside Dinner</td>
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## Day 2

**Tuesday, October 30**

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<th>Time</th>
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<tr>
<td>08:00</td>
<td>Registration</td>
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<tr>
<td>09:00</td>
<td>Plenary: Logistics of Drone Delivery</td>
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<td></td>
<td>Olivier Defawe, VillageReach, Mwanaisa Ali, Business Operation, Posta Tanzania</td>
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<td></td>
<td>Riaz Lodhi, WFP, Dirk Rabien, GIZ</td>
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<tr>
<td>10:00</td>
<td>Plenary: Unified Traffic Management Services</td>
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<td>Marc Coen, Unity</td>
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<td>Manu Lubrano, Involi</td>
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<td>Robert Chocourrat, AirMap</td>
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<td>Ayhan Kamel, Exponent</td>
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<td>10:45</td>
<td>Plenary: Performance Based Regulations</td>
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<td></td>
<td>Harrison Wolf, WFP, Andrew Mutabarakia, CAA Rwanda</td>
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<td></td>
<td>Philip Dawson, APAS and UAS, ICAO, Cliff Sweatte, WFP</td>
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<tr>
<td>11:30</td>
<td>Flight Demonstrations, Networking, &amp; Lunch</td>
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<td>*Hand-on UAS training session by Tanzania Flying Labs will begin at 13:30</td>
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<td>13:30</td>
<td>Regulation</td>
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<td></td>
<td>Harrison Wolf, WEF</td>
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<td>13:30</td>
<td>Technology</td>
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<td>Jean Christophe Zufferey, senseFly</td>
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<td></td>
<td>LVC Competition Technology Workshop: What are we trying to demonstrate and prove?</td>
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<td>15:30</td>
<td>Tea Break</td>
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<td></td>
<td>LVC Competition Requirements for June 2019</td>
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<tr>
<td>16:00</td>
<td>Drone Regulations: New Paradigms &amp; Methods</td>
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<td></td>
<td>Harrison Wolf, Lead, Drones and Tomorrow’s Airspace, World Economic Forum Remarks from TCAA</td>
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<td>Droneports: Costs, Benefits &amp; Business Models</td>
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<td>Ben Savonen, RED team, Field Ready</td>
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<tr>
<td>17:00</td>
<td>Networking</td>
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<tr>
<td>18:00</td>
<td>Lakeside Dinner</td>
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## DAY 3
### WEDNESDAY
#### OCTOBER 31

<table>
<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>08:00</td>
<td>REGISTRATION</td>
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<tr>
<td>09:00</td>
<td>PLENARY: REPORTING BACK &amp; PANEL DISCUSSION</td>
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<td></td>
<td>**WEF Harrison Wolf ** WEF</td>
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<td></td>
<td>Aerial Futures <strong>Greg Lindsay</strong> New Cities Foundation</td>
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<tr>
<td>09:30</td>
<td>HEAVY LIFT SESSION</td>
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<td>Riaz Lodhi <strong>WFP</strong> Kush Gadha <strong>Astral Aviation</strong> Cliff Sweatte <strong>WFP</strong></td>
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<tr>
<td>10:30</td>
<td>KEYNOTE 3</td>
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<td>Zipline: Building on lessons learned from two years of operating the world's first drone logistics service.</td>
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<td>Dan Czerwonka Global Operations, Zipline</td>
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<tr>
<td>11:00</td>
<td>PLENARY: MWANZA DRONEPORT &amp; CORRIDOR VISION</td>
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<td></td>
<td>Jonathan Ledgard Founder, Droneport and Founder, Linnaeus, Visiting Professor, CVUT</td>
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<tr>
<td>11:30</td>
<td>FLIGHT DEMONSTRATIONS, NETWORKING, &amp; LUNCH</td>
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<tr>
<td></td>
<td>*Hand-on UAS training session by Tanzania Flying Labs will begin at 15:30</td>
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<tr>
<td>13:30</td>
<td>PLENARY: PRESENTING THE LAKE VICTORIA CHALLENGE 2019</td>
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<td></td>
<td>Edward Anderson Senior DRM &amp; ICT Specialist, World Bank</td>
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<td>George Mulamula <strong>Director, DTBi</strong></td>
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<td>Michael Scheibenreif Drone Corridor Lead, UNICEF</td>
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<tr>
<td>14:30</td>
<td>CLOSING</td>
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<tr>
<td></td>
<td>Mr Hamza Johari <strong>Tanzania Civil Aviation Authority (TCAA)</strong></td>
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<td>Edward Anderson <strong>World Bank</strong></td>
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<td>Hon. John Mongella <strong>Mwanza Regional Commissioner</strong></td>
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<td>Hon. Prof. Joyce NdaliChako <strong>(MP) Tanzania Minister of Science, Education &amp; Technology</strong></td>
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ATTENDEES BY PROFESSION

TECHNOLOGY INNOVATORS
- UAS Companies
- Robotics
- Fabrication
- Scientists

MEDIA
- TV
- Radio
- Print
- Social

GOVERNMENT REGULATORS
- Aviation authorities
- Controllers
- Security
- Legal
- Policy makers

USERS & APPLICATIONS
- Post
- Tech
- Health
- Transport

3 DAYS INVITATION ONLY

150+ ATTENDEES

LIVE DRONE DEMOS

15 + A-LIST SPEAKERS

REGULATORS, CUSTOMERS, & TECHNOLOGY PROVIDERS
HON. ISACK KAMWELWE (MP)
Tanzania Minister of Works, Transport & Communication

HON. PROF. JOYCE NDALICHAKO (MP)
Tanzania Minister of Science, Higher Education & Technology

HON. JOHN MONGELLA
Mwanza Regional Commissioner

MS. BELLA BIRD
World Bank Country Director for Tanzania, Malawi, Burundi & Somalia

MR HAMZA JOHARI
Director General, Tanzania Civil Aviation Authority (TCAA)

MICHAEL DUNFORD
WFP Representative in Tanzania

H.E. ARTHUR MATTI
Ambassador of Switzerland to Zambia and the EAC, Embassy of Switzerland
Laurean Bwanakunu currently serves as Director General for the Medical Stores Department for the Government of Tanzania. Prior to this, he held the position of Executive Director for the Ariel Glaser Pediatric AIDS healthcare initiative and worked in several roles within the International Federation of Red Cross Societies. He has a Master’s Degree of Public Administration from the University of Potsdam.

Marc Coen is heading Unify’s international sales team. Marc holds an IT degree from the Karel de Grote Hogeschool in Antwerp. Before joining Unify Marc held different positions in the IT and BPO industry in Sales, Pre-Sales and Account Management, including Engagement and Implementation Manager Europe at Xerox. Marc will be leading the commercializing of the Unify software suite on a global scale.

Robert started his career as Radio Engineer for Early Alert Network, Ace-High. With a Master in Business Sales Management, and prior to join Airmap, Robert was involved in the sale of surveillance VTOLs for Law Enforcement Agencies across EMEA.

Philip is a policy consultant in the RPAS and UAS programme at the International Civil Aviation Organization (ICAO). At ICAO he works with representatives from regulators and international trade associations on the development and implementation of ICAO standards, including presenting at international workshops and conferences.

Edward Anderson has 15 years experience focused on science, technology and innovation for sustainable development. He is currently the Senior DRM and ICT Specialist stationed in Dar es Salaam, Tanzania for the World Bank. His work is at the nexus of urbanization and climate risks, and leverages emerging technologies and methods to integrate resilience into urban planning systems. Edward also participates on the advisory boards of European Commission smart city projects including City SDK, Coda for Europe and Digital Social Innovation and for the European Space Agency’s Open Science Committee and EU’s Drones in Humanitarian Action Expert Working Group.

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Philip has advised governments on the development of privacy and data protection policies, and acted as a policy advisor to advanced technology startups. Phil holds undergraduate degrees from McGill University, as well as a postgraduate degree from the London School of Economics and Political Science.
SPEAKERS

OLIVIER DEFAWE
Senior Manager, VillageReach

Olivier DeFAWE has more than 15 years of experience in global health, in Haiti and West Africa.

He leads the design and implementation of a portfolio of health innovations to improve health care delivery at the last mile with expertise in supply chain, digital health, clinical laboratory practice.

As the lead of VillageReach’s Drones for Health program, Olivier drives exploration of the role of Drones in the public health system. Olivier manages the UAV for Payload Delivery Working Group, which promotes knowledge sharing for the application of drones for public health.

Olivier holds a PhD in Biomedical Sciences from the University of Liège in Belgium.

KUSH GADHIA
Business Development Officer, Astral Aviation

Kush GadHIA is a graduate in Aviation Business Administration from Embry-Riddle Aeronautical University. He holds an FAA Private Pilot license, FAA Small UAS Remote Pilot and SACAa multi-rotor RPAa pilot. Apart from the certifications, Kush is passionate about the use of commercial drones and the impact they will have on society.

He is the current Business Development Officer at Astral Aerial Solutions, and Accountable Manager at RPAa Training Academy Kenya.

“UAV’s in Kenya will open up great opportunities, and the youth are sure to benefit from it. It is very exciting to be at the center of it all and an honor to be a part of the team that is building it.”

DAN CZERWONKA
Global Operations, Zipline

Dan dreams big, loves what he does, and works every day to make the world a better place.

As head of Zipline’s Global Operations team and International Legal Counsel, Dan manages the deployment of new flight centers to deliver critical medical supplies to remote health facilities around the world. He recently oversaw the complete upgrade and construction of Zipline’s first and second facilities in Rwanda, making them the world’s first 2 commercial drone delivery facilities operating at national scale.

He is currently planning and constructing Zipline’s next locations in multiple countries around the world.

Don is a graduate of Georgetown University Law School and alumnus of America’s oldest law firm, where he worked on the landmark Enron bankruptcy case before pivoting to co-found and sell a defense translation services company. He holds three US State Bar Licenses, a Part 107 sUAS drone operator license, a Red Cross Lifeguard certification, builds electric bicycles and plays ukulele.

AYHAN KAMIL
Manager Commercial & Finance, Exponent

Ayhan leads Business Development at Exponent. He was responsible for executing Exponent’s first UTM implementation in Dubai. Ayhan is an ardent proponent of the unmanned industry- with a keen focus on the nascent UTM industry. He believes that UTM will be the key driver and facilitator of the unmanned industry in the next decade.

Ayhan works closely with the technical leads at Exponent to conceptualize and serve the market requirements of tomorrow in the UTM of today. Prior to joining Exponent in 2015, Ayhan has a background in Financial Management.

JONATHAN LEDGARD
Founder, Droneport and Founder, Linneaus, Visiting Professor, CVUT

Jonathan Ledgard is founder of the Rossums studio and inventor of the Redline (blood delivery) and BlueLine (heavy commercial delivery) concept for cargo drones in Africa. He developed the first typology of a droneport for the tropics with Lord Norman Foster. He was a director of futureAfrica at EPFL in Switzerland and served as a longtime foreign and war correspondent for The Economist.

Separately, he is a novelist. His last novel, Submergence, a New York Times book of the year, was adapted for Hollywood by Wim Wenders.

GREG LINDSAY
Senior Fellow, New Cities Foundation

Greg Lindsay is a senior fellow of the New Cities Foundation — where he leads the Connected Mobility Initiative — and the director of strategy for LaCoMotion, a new mobility festival coming to the Arts District of Los Angeles in November 2017. He is also a non-resident senior fellow of the Atlantic Council’s Strategic Foreignt Initiative, a visiting scholar at New York University’s Rudin Center for Transportation Policy & Management, a contributing writer for Fast Company, and co-author of Aerotropolis: The Way We’ll Live Next.

RIAZ LODHI
Head of Supply Chain Management, WFP

Riaz Lodhi is currently working as head of supply chain with the United Nations World Food Programme in Dar es Salaam, Tanzania. Riaz holds a master’s degree in public administration and has more than 24 years of experience with WFP, working in different countries.

Before assuming his current assignment, Riaz worked as Deputy Country Director in Colombia and Ecuador from January 2008 until June 2016 where, in addition to managing a complex WFP programme to assist the internally displaced people and refugees affected by the conflict in Colombia, he supported the national capacity building including school feeding programmes.

Riaz is a strong supporter of innovation in food security in order to address the emerging and complex challenges to reach zero hunger.

MANU LUBRANO
CEO & Co-Founder, Involi

Manu Lubrano is CEO & Co-Founder at INVOLI. Former Head of Industrialization at Swiss drone manufacturer sKystar and Co-Founder of the NCO Drone Adventures, Manu is in the drone industry since 2012. He is an experienced entrepreneur with a PhD in Manufacturing Systems and Robotics from EPFL and he is particularly skilled in Computer Science, Robotics, Industrialization and start-ups.

INVOLI is a Swiss-based company which develops air traffic awareness systems for professional drone applications, offering unique low altitude air traffic data for safer drone flight, enabling drone air traffic management and ground-based aircraft detect and avoid, even automatically.

INVOLI is a member of the Global UTM Association (Gutma) and the Drone Industry Association Switzerland (DIAS).
MATIKO MACHAGGE
Regional Tech Advisor Tanzania, John Snow Inc.

MatikoMachagge is an experienced Public Health Logistician and Capacity Building expert with more than ten years of experience in public health supply chain management and health system strengthening in Tanzania. He is well-versed and experienced in supply chain system designs and assessment, SCM capacity building, and capacity development for human resources for public health SCM. Trained and certified as pharmacist, he has developed to a public health supply chain expert working with 3SI in different capacities up to now as inSupply Country Team lead. Matiko has a passion in the use of technology and innovative solution in improving public health supply chain and a firm believer of data use for supply chain continuous improvement.

WILLIAM MALUKI
Head of Engineering, GearBox

Maluki, Head of Engineering at the Kenyan, Makerspace – Gearbox, is an Engineer pioneering a new CNC-based pipe bend. Designed for manufacturers of metal frames—think wheelchair frames, steel-tube furniture, or seats for matatus, Kenya’s fleet of privately-owned minibuses. He has a deep conviction that local innovators hold the key to solving local challenges especially equipping small scale manufacturers with tools and equipment specifically designed for their unique technological and financial needs.

GEORGE MULAMULA
CEO, Dar Teknohama (ICT) Business Incubator

Dr. George Mulamula is the founder and CEO of the Dar Teknohama (ICT) Business Incubator (DTBi) for entrepreneurship & innovation at the Commission for Science & Technology, the only tech incubator in Tanzania.

He is also the Senior Government Advisor on ICT entrepreneurship and innovation for an enabling environment and ecosystem. Previously he was the first Principal Deputy Chief Executive Officer of the Rwanda Development Board (RDB) and Senior Advisor in the Ministry of Commerce & Industry in Rwanda, working on SME and Entrepreneurship Policy. He was also the Senior ICT Advisor in the Government of Rwanda and in that capacity the Lead Policy Advisor on the Rwanda National Information Communication Infrastructure Policy Plan II and WiSSi Document preparation. He has been a guest lecturer at Carnegie Mellon University (Kigali Campus) and has taught at KIST in Kigali, Rwanda.

ANDREW MUTABARUKA
Head of Quality and Safety, Civil Aviation Authority, Rwanda

Andrew is currently working as Head of Quality and Safety for Rwanda Civil Aviation Authority, as well as the Rwanda State Safety Program Coordinator. Prior to this, he worked as an air traffic controller, an air traffic management, and a safety manager for air navigation services. He additionally serves on the Rwanda Civil Aviation UAS Technical Advisory Committee and has 21 years of experience in aviation. He holds a BBA degree from the University of Rwanda.

DIRK RABIEN
Project Manager, GIZ

Dirk Rabien is currently working as a Project Manager for the GIZ/BMZ funded Project “Access to high-quality and affordable medicines in Africa and Asia”. His responsibilities include the conception and implementation of a pilot-project in cooperation with DHL. The project uses drones to carry medicines and laboratory samples in Lake Victoria Region in Tanzania, making the transport easier, faster and thus increasing accessibility to adequate medical services.

Moreover, within the scope of the Global Project, Mr. Rabien has been engaged in the promotion of local pharma-production in East Africa.

MWANISHA ALLI SAID
General Manager, Business Operation, Posta Tanzania

Ms. Mwanisha Ali Said currently works as the general manager in business operation for Posta Tanzania. She leads all 20 postal regions, six major business departments: Marketing, Mails and Logistics, Express Mails Services (EMS), Agency and Financial Services Information Communication Technology and E-Business. Prior to this, she worked for the Ministry of Education, Mvikaya University College of Education, and Zanzibar University. She holds a BA and an MA in Political Science and Public Administration.

HELENA SAMSIOE
CEO & Founder, GLOBHE

Helena is the CEO and Founder of GLOBHE, a drone service company on a mission to create a better future with drones. Helena is a firm believer that the future of possible is already here and passionate about using innovative technology and collaborations to show it.

In 2017 Helena was ranked among the top 100 young business leaders in Sweden, won “Female Founder of the Year” by Di Digital, named among the ‘Top Woman to Watch in the Drone Industry’, won “Rivstart” the prestigious innovation competition by Swedbank and was featured as the “Drone Queen” on BBC.

Ben Savonen is an engineer and maker who is a part of Field Ready’s Rapid Emergency Deployment (RED) team. He is also a research engineer at Pennsylvania State University’s Humanitarian Engineering program, and he has spent the last several years looking at how 3D printing can benefit rural healthcare systems in East Africa. From this work he cofounded Kijenzi, a social impact venture that uses 3D printing to create both employment opportunities and spare parts for hospitals in Western Kenya.

MICHAEL SCHEIBENREIF
UNICEF – Humanitarian Drone Testing Corridor Malawi

Michael Scheibenreif managed the world’s first humanitarian drone testing corridor for UNICEF in Malawi. He is driving UNICEF’s broader strategy on the ‘drone ecosystem’ to facilitate the provision of ‘drones for good’ services in Malawi. This includes the establishment of an African Drone & Data Academy, the ‘harvesting’ and analysis of drone-acquired data through Artificial Intelligence, or the establishment of a drone network to deliver medicine to remote village clinics.

He holds a Master of Business Administration, a Master in Political Science, a Master in European Public Administration and a PhD in ‘organizational development of international public sector organizations’.
JUDITH SHERMAN  
Chief HIV and AIDS, UNICEF  
Judith Sherman is the Chief of HIV and AIDS at UNICEF Malawi. Since 1992, she has lived in Guinea, Morocco, Zambia and Malawi. In 2016, Judith launched UNICEF’s first drone initiative, a feasibility study on using drones to transport laboratory samples for early infant diagnosis of HIV. She has led efforts to establish Malawi’s drone regulations, develop Africa’s first humanitarian drone air corridor, use drones for emergency preparedness and response, and build local capacity to integrate drone operations and drone-acquired data into development. Judith holds a Master’s in Business Administration from George Washington University and a Bachelor’s of Science in International Politics from Georgetown University.

CLIFF SWEATTE  
Aviation Officer, WFP  
Captain Clifford “Cliff” Sweatte is an Aviation Officer and global lead for The World Food Programme’s (WFP) Remotely Piloted Aircraft Systems (RPAS). Cliff provides technical expertise for the identification of RPAS manufacturers and service providers for their potential use in humanitarian air cargo and emergency aviation missions. Cliff’s duties also include drafting WFP policies and guidance for enabling RPAS cargo operations in accordance with ICAO frameworks and civil aviation authority regulations.

Cliff previously served as an International Civil Aviation Organization (ICAO) RPAS technical officer. He flew as an international air carrier pilot and served as an airline union leader, developing safety programs with the FAA. He is also a licensed Remote Pilot.

WILSON KAGABO  
Managing Director, Locus Dynamics  
Wilson Kagabo is the Managing Director of Locus Dynamics Ltd. – a Ngali Holdings Ltd company. He is also a board director at Akagera Aviation Ltd. Kagabo is active member of the Rwanda drone industry – he sits on various national technical committees and working groups.

Previously, Kagabo has served different roles namely: Acting CEO of Ngali Holdings, university lecturer, researcher, writer, actor, journalist, and photographer among others.

He holds a Master Degree in Aerospace Systems and is currently pursuing a Doctorate degree in Unmanned Systems Engineering.

JEAN-CHRISTOPHE ZUFFEREY  
Co-founder, senseFly  
Jean-Christophe Zufferey was CEO of senseFly SA, a leading company in autonomous mapping drones, which he co-founded. senseFly’s proven solutions simplify the collection and analysis of geospatial data, allowing professionals in surveying, agriculture, engineering and humanitarian aid to make better decisions, faster.

Before founding senseFly, Jean-Christophe pioneered the field of small, bio-inspired, autonomous flying robots. He holds a PhD in Mobile Robotics from the Swiss Federal Institute of Technology in Lausanne (EPFL), where he has taught mobile robotics and managed numerous research projects. He is a licensed pilot with a passion for flying helicopters and aerobatics.

HARRISON WOLF  
Drone’s and Tomorrow’s Airspace, WEF  
Harrison Wolf is a leader and author in the field of UAVs with global expertise in Safety, Security, and Risk Mitigation Strategies. He is Project Lead for the World Economic Forum’s Center for the Fourth Industrial Revolution. Harrison is working to reimagine certification processes for autonomous flying passenger vehicles, with emphasis on machine learning and artificial intelligence based control governance.

Harrison founded Wolf UAS LLC, a UAS consulting company. He sits on two ANSI Technical Standards Working Groups for Humanitarian Relief and Critical Infrastructure and has helped set up over 50 programs in law enforcement, energy generation and distribution, academia, civil society, humanitarian access, disaster response, and resource management.
**Wingtra**
Wingtra manufactures high precision VTOL drones that collect survey-grade aerial data for professional surveying and mapping applications.

**Wingcopter**
Delivering medicines to remote health facilities or enabling the efficient inspection of public infrastructure – Wingcopter creates technologies to save and improve lives.

**FlyPulse**
FlyPulse AB develops drone system to save lives. Medical transportation, accident overviews or locate missing people are some of the applications.

**Rigi Technologies**
Rigi Technologies is an aerial logistics company connecting rural communities through easy and cost effective drone package deliveries.

**Siniger LLC**
Siniger LLC manufactures easy to use VTOL aircraft systems that use a convenient quick-fold design for mapping, cargo, security and scientific measurements.
UTM COMPANIES

EXPONENT
Exponent Technology Services provides bespoke solutions by integrating Unmanned Aerial Vehicles (UAS) and auto-ID technologies.

AIRMAP
Airmap is the leading global provider of aeronautical data and services to unmanned aircraft, or drones.

UNIFLY
Unifly is a software company with a platform for the safe integration of drones into the airspace – aiming to bridge the gap between manned and unmanned aviation.

INVOLI
Involi provides comprehensive air traffic data enabling automatic drone missions, to unblock commercial drone applications by making drone’s flight safer.
DAY 1
MONDAY
OCTOBER 29

08:00
REGISTRATION

09:00
OFFICIAL WELCOME ADDRESS

Mr. Hamza Johari
Tanzania Civil Aviation Authority (TCAA)

Ms. Bella Bird
World Bank Country Director for Tanzania, Malawi, Burundi & Somalia

Hon. John Mongella
Mwanza Regional Commissioner

Hon. Isack Kamwelwe
Tanzania Minister of Works, Transport & Communication

10:00
KEYNOTE 1
ADVANCES IN AFRICAN ROBOTICS & MANUFACTURE

William Maluki
Head of Engineering, GearBox

Jonathan Ledgard
Founder, Droneport and Founder, Linnaeus, Visiting Professor, CVUT

The technologist and former Africa correspondent for The Economist outlines the rationale for a supplemental transportation system of cargo drones and droneports in African skies, starting on Lake Victoria. As director at the avant garde EPFL in Switzerland Ledgard invented the concept of a Red Line for medical and humanitarian cargo drones and a Blue Line for fully commercial routes.

He developed the case for blood delivery and introduced Zipline into Rwanda. Ledgard will also outline a vision for droneports, which may become commonplace in towns across the Equatorial belt of the planet.

10:00
KEYNOTE 2
DRONES IN THE LOWER SKIES – A VISION FOR AFRICA

World-wide, there has been talk of the 4th industrial revolution and the impact it will have to both quality of life and nature of work as we know it today. Different jurisdictions across the globe are in various stages of this phenomenon and Africa is no exception.

Ever since the legendary Wright brothers’ accomplishment in the mastery of flight, Aviation has advanced immensely from the simple manned contraption to sophisticated unmanned vehicles of the future!

Synonymous with the 4th industrial revolution, are emerging disciplines such as robotics, machine learning (ML), artificial intelligence (AI), Blockchain, Pay-As-You-Go business models among others.

These technologies have made majority of fortune 100 companies and have the potential of power-boosting Africa’s industrialization. We shall explore practical lessons learnt in hardware innovations in Africa in the hopes of shedding light on the challenges and great opportunities that lie ahead.
11:00 IGNITE TALKS: INTRODUCTION TO FLIGHT TEAMS & TECHNOLOGY
Leading drone companies present a snapshot of their work and the technology that will be demonstrated during the LVC Trial and Symposium.

11:30 FLIGHT DEMONSTRATIONS, NETWORKING, & LUNCH
*Hands-on UAS training session by Tanzania Flying Labs will begin at 15:30

13:30 PLENARY: AFRICA UPDATES & EXPERIENCE
Tanzania Connecting the villages and islands on Lake Victoria for better health
Rwanda Experiencing with UAV operations
Malawi Using drones for development and humanitarian response

14:30 USERS: MEDICAL COMMODITIES – CHALLENGES & OPPORTUNITIES
The session explores user needs, capabilities of current technologies and frameworks on how to evaluate the use of drones for medical commodities.

15:30 TEA BREAK

15:30 DRONE REGULATIONS: NEW PARADIGMS & METHODS
Examining traditional and fresh approaches to unmanned aviation through lesson sharing from successful international projects, explanations of the latest forms of regulatory frameworks, and a roadmap for approving new drone operations.

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18:00 LAKESIDE DINNER

17:00 RECEPTION
Welcome from H.E. Arthur Mattli, Ambassador of Switzerland to Zambia and the EAC, Embassy of Switzerland
DAY 2  
TUESDAY  
OCTOBER 30

08:00  REGISTRATION

09:00  PLENARY: LOGISTICS OF DRONE DELIVERY
Drones can offer an alternative method for the transportation of goods. This session explores how drones have been and can be integrated into routine and emergency logistics.

Olivier Defawe  
VillageReach

Mwanaisha Ali Said  
Business Operation, Posta Tanzania

Riaz Lodhi  
WFP

Dirk Rabien  
GIZ

10:00  PLENARY: UNIFIED TRAFFIC MANAGEMENT SERVICES
Four UTM companies present their work and solutions for managing airspace.

Marc Coen  
Unifly

Manu Lubrano  
Involi

Robert Chicourrat  
Airmap

Ayhan Kamill  
Exponent
**TUESDAY OCTOBER 30**

**10:00 INFRASTRUCTURE**

DronePorts – Fieldtrip: Juma Island

Aerial Futures

Invitation only field trip to Juma Island

**11:00 PLENARY: PERFORMANCE BASED REGULATIONS**

Harrison Wolf  
Lead, Drone's and Tomorrow's Airspace, WEF

Andrew Mutabaruka  
UAS Regulation, CAA Rwanda

Philip Dawson  
RPAS and UAS, ICAO

Cliff Sweatte  
WFP

**11:30 FLIGHT DEMONSTRATIONS, NETWORKING & LUNCH**

*hand-on UAS training session by Tanzania Flying Labs will begin at 13:30*

**13:30 TRACK 2 TECHNOLOGY**

**FACILITATOR: JEAN-CHRISTOPHE ZUFFEREY SENSEFLY**

Airspace is both a limited natural resource and a strategic transport infrastructure. Until now, we have mainly explored and exploited our skies using manned aircraft. Thanks to the smartphone revolution, powerful, small, low power computers, combined with intelligent sensors and efficient electric propulsion systems, have been used to create a next generation of affordable flying robots, soon to be, all connected to the Internet. These “flying internet of things” will access low level/usage airspace and will numerically dominate our skies, transporting goods and passengers.

The UTM & Technology Track will review with industry leaders, innovative cargo drone designs (STOL, VTOL, hybrid, launch and recovery solutions), advances in electric powertrains, the latest in fuel cell and battery technologies – also the shipping, charging and recycling of – and the state of the art in autonomous vehicles. Presentations on reliable and cyber-secure communication, navigation, surveillance and counteriong systems will be made by experts. How to safely and efficiently share the airspace will be discussed with traditional Air Navigation Service Providers and suppliers of new Unmanned Traffic Management services. The goal: Unified Traffic Management.

**13:30 TRACK 3 INFRASTRUCTURE**

**FACILITATOR: BEN SAVONEN FIELD READY**

The emergence of drone technologies necessitates an entirely new mobility paradigm. Newer, cleaner, and safer infrastructure will enable the people of Lake Victoria to be better connected and overcome the current infrastructure deficit. Transforming mobility infrastructure can provide rural towns and villages with access to modern services like emergency aid, commercial goods and medical supplies. Beyond logistics, droneports also create opportunities for new civic spaces. The potential scale and value of this proposition is enormous: much like every European town once had a train station, we envision a future in which every African town has a droneport.

The Infrastructure track explores imaginary architectural approaches that enhance the shared economic value and scalability of droneports in remote, rural areas, including private-public partnerships and financing business models. Furthermore, this track will produce design sketches for droneports in Mwanza and Juma Island, where the Lake Victoria Challenge will take place in June 2019.

**17:00 NETWORKING**

**18:00 LAKESIDE DINNER**
09:00 PLENARY: REPORTING BACK & PANEL DISCUSSION
Track leaders report back to the group with conclusions from their respective sessions and outlooks for the future.

- **WEF**
  Harrison Wolf
  Lead, Drones and Tomorrow’s Airspace, WEF

- **Technology & UTM**
  Jean-Christophe Zufferey
  Co-founder, senseFly

- **Aerial Futures**
  Greg Lindsay
  Senior Fellow, New Cities Foundation

09:30 HEAVY LIFT SESSION
One of the most frequent logistical challenge faced by WFP and the humanitarian community is often the last mile access to affected communities that are cut off due to floods, earthquakes or other types of hostile activities such as wars and conflicts.

This panel will therefore explore a) WFP supply chain challenges and potential opportunities for heavy lift drone technologies, b) demonstrate an example use case by Astral Aviation, a key player in heavy lift cargo drone technologies in East Africa, and c) a brief overview of the necessary regulatory framework and best practices needed to support the advancement of, and enable heavy lift cargo drone operations.

- **Riaz Lodhi**
  Head of Supply Chain Management, WFP

- **Kush Gadhia**
  CEO, Astral Aviation

- **Cliff Sweatte**
  Aviation Officer, WFP
11:00 PLENARY: PRESENTING THE LAKE VICTORIA CHALLENGE 2019
Announcing the timeline, decisions and how you can get involved in LVC 2019.

Edward Anderson
Senior DRM & ICT Specialist, World Bank

George Mulamula
CEO, DTBi

Michael Scheibenreif
Humanitarian Drone Testing Corridor Malawi, UNICEF

11:30 FLIGHT DEMONSTRATIONS, NETWORKING, & LUNCH
*hand-on UAS training session by Tanzania Flying Labs will begin at 15:30

10:00 KEYNOTE 3
LESSONS FROM ZIPLINE

Dan Czerwonka
Global Operations, Zipline

Dan shares lessons learned from two years of operating the world’s first drone logistics service in Rwanda and reflects on what’s next for Zipline.

10:30 PLENARY: MWANZA DRONEPORT & CORRIDOR VISION

Jonathan Ledgard
Founder, Droneport and Founder, Linnaeus, Visiting Professor, CVUT

Based on the findings of the droneport group and the wider meeting, Ledgard will use this session to identify some possible starting points for the construction of a droneport in Mwanza and up to three smaller droneports on the lake in 2019.

He will summarise some of the possible business models for the route, lessons from existing operators and most especially communities themselves.

14:30 CLOSING STATEMENTS

Mr Hamza Johari
Tanzania Civil Aviation Authority (TCAA)

Edward Anderson
World Bank

Hon. John Mongella
Mwanza Regional Commissioner

Hon. Prof. Joyce Ndaiichako (MP)
Tanzania Minister of Science, Higher Education & Technology

WEDNESDAY
OCTOBER 31
A GLOBAL ADVISORY BOARD

GEORGE MULAMULA
Director of the Lair Teknotarma Business Incubator

SOLOMZI MAKOHLISO
Deputy Leader of the Essential Tech Program at EPFL

LORENZO MURZILLI
Leader of the Joint Authorities for Rulemaking on Unmanned Systems

LENNY KOH
Chair Professor at the University of Sheffield

ALEX BRISTOL
CEO of SkyGuide

ANDRÉ BORSCHBERG
Co-founder and pilot of Solar Impulse

HARRISON WOLF
Project Lead for the World Economic Forum Civil Drones for Tomorrow’s Commerce

MIN (TIMOTHY) TIAN
SF Technology and the CTO of SF Express

TEMIE GIWA
Founder and CEO of LifeBank

JEAN-CHRISTOPHE ZUFFEREY
Co-founder senseFly SA

JONATHAN LEDGARD
Founder, Dronerport and Founder, Linnaeus, Visiting Professor, CVUT
PARTNER ORGANIZATIONS

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- Korea Green Growth Partnership
- World Bank Group
- Ministry of Foreign Affairs of Denmark
- unicef
- World Food Programme
- Aerial Futures
- JSI
- African Drone
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TOGETHER WE CAN

INSPIRE A NEW AGE OF AVIATION
MAKE HISTORY
UNLOCK AFRICA’S SKIES

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