UNIDO ITPO Germany Joint Booth
Private Sector Innovations
for the Humanitarian Sector

DIHAD, Dubai, 14-16 March 2022
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UNIDO is the specialized agency of the United Nations that promotes industrial development for poverty reduction, inclusive globalization and environmental sustainability. Through its Investment and Technology Promotion Offices (ITPOs), UNIDO promotes the transfer of technology and investments to developing countries to support sustainable economic development.

The UNIDO ITPO Germany was established in 2017 and is located at the UN Campus in Bonn, Germany. ITPO Germany supports technology transfer, private sector investments and industrial cooperation with developing countries for sustainable, private sector-led economic development. The participation in DIHAD 2022 is part of a broader strategic initiative by ITPO Germany to support innovations and technology transfer into fragile and conflict-affected situations (FCS) and the humanitarian sector in particular.

With an estimated 84 Million forcibly displaced people worldwide in 2021 (UNHCR), the need and potential for engaging the private sector is huge. By providing private sector players an effective platform to engage with other UN-Agencies and other relevant stakeholders, ITPO Germany ultimately aims at empowering affected refugee and host communities through creating economic opportunities. At the same time, the initiative highlights the untapped potential and role that the private sector can play in finding innovative and more sustainable solutions for humanitarian operations themselves, for example, by bringing in new partners, establishing new financing models or by adopting suitable modes of operation and procurement practices.

This brochure introduces the 14 companies participating in the UNIDO ITPO Germany Joint Booth at DIHAD 2022. It also presents two expert partners who will join the delegation at DIHAD as resource persons: Mr. Kilian Kleinschmidt, CEO and Founder at IPA Switxboard, a seasoned humanitarian practitioner and former UNHCR official, and Mr. David Lecoque, CEO at Alliance for Rural Electrification (ARE), a long-standing partner of UNIDO and ITPO Germany in the energy sector.

DIHAD 2022 is a kick-off event for the upcoming UNIDO ITPO Germany private sector missions with UNHCR to Eastern Africa, which is open to a wider network of companies and partners. Please do not hesitate to reach out to us for further information.

**Activities at DIHAD**

Highlights of the UNIDO ITPO Germany Delegation to DIHAD include:

- Visit to International Humanitarian City, together with participants of the French Delegation (13 March, 15:00h onwards)
- Exhibition and B2B Meetings with 14 Companies at UNIDO booths A15, A28-31 (14-16 March, continuous)
- Innovation Workshop 1: Solutions for the WASH and Health Sectors (14 March, 17:00-18:00h)
- Expert Workshop with Mr. Kilian Kleinschmidt on Private Sector-Humanitarian Sector Cooperation (15 March, 17:30-19:00h, at Novotel Dubai World Trade Center)
- Innovation Workshop 2: Keynote speech by Mr. Kilian Kleinschmidt (16 March, 11:15-11:35h), followed by an innovation workshop on Solutions for Off-Grid Energy and Circular Economy (16 March, 11:35-12:15h)

**Activities beyond DIHAD**

The participation at DIHAD is a further milestone for ITPO Germany, its co-exhibitors and other interested companies in preparation of the planned Private Sector Missions to Kenya and Uganda, co-organized with UNHCR and scheduled for the second half of 2022. Interested partners and companies can reach out to ITPO Germany to join this initiative, which will also include a series of (online) preparatory workshops. Further, ITPO Germany is going to launch its online Investment Technology Promotion Portal (ITPP) in the first half of 2022, which will also feature companies and solutions for the FCS and humanitarian context. The platform will increase the visibility of such solutions to potential partners, other UN agencies and aid organizations to foster partnerships with other companies and financing partners.
BAUER Resources GmbH is a leading German environmental services and solution provider with established offices across the Middle-East and Africa. We work in the fields of deep water well drilling, well equipment manufacturing and wastewater treatment using constructed wetlands. Our innovative and compact wastewater treatment system known as the ReedBox® offers easy deployment and treatment of domestic wastewater from e.g. camps, schools and remote settlements. It is also suitable as a decentralized treatment unit connected directly to toilet, bathing, washing or kitchen facilities in emergency or humanitarian situations. A 20-foot container has a treatment capacity of 7.5m³/day whereas a 40-foot container can treat up to 15m³/day of domestic wastewater. The system offers integrated sludge treatment and does not require skilled personnel to operate.

betteries – Mobile and affordable power for demanding market, based on upcycling electric vehicle (EV) batteries. We upcycle 2nd life EV batteries to accelerate the transition to renewables and are well positioned to deliver scalable CO₂ savings and protect scarce resources. Our innovative business model embraces circular economy principles and significantly lowers cost of ownership. betteries is much more than a battery, it is a multipurpose power system. Each betteries system can store 2.3kWh–9.2kWh of energy and can flexibly deliver up to 5kW of electric DC as well as AC power. Betteries are modular in configuration to be stacked horizontally or vertically and can be charged by a variety of energy sources (solar, wind, hydro, grid). Smart electronics including Wi-fi and GPS enables betteries systems to be remotely monitored and controlled through an IoT platform. Rugged and waterproof, betteries offers solutions for e-mobility, off-grid productive use and on-grid backup power.
Boreal Light GmbH is a Berlin-based company specialized on renewable energy solution for water treatment facilities. The company designs and manufactures affordable solar water desalination systems for off-grid communities around the globe. Systems manufactured by Boreal Light are capable of delivering high quality hygiene drinking, irrigation, fish farm and sanitation water from any kind of high saline and polluted water resources. Powered fully by solar, simplicity of the design and affordability of the cost of the systems manufactured by Boreal Light are the three great competences the company is proud of.

BOS AG is a German manufacturer and developer of hybrid battery energy storage technology, experts in solar energy and lithium-ion based battery systems. We enable freedom where power is far away, but absolute reliability of electricity is crucial. With our Li-Pb (lithium-lead) hybrid charging technology for solar systems that supports intelligent load management, large parts of the off-grid community in developing and industrial countries get access to high quality, long lasting and affordable energy solutions. The BOS Balance of Storage Systems AG was founded in 2014. Since then we aim at delivering high quality and state of the art products. Our unique turnkey storage system enables cost savings compared to other storage options and it is even more attractive through on-site installation. BOS systems offer independence from poor electricity grids, diesel genset and other sources with the stored energy of clean and affordable solar power.
The construction of temporary technical infrastructure - especially cooling - has been our business for over 40 years. Since 2017, we have been bringing this experience to the humanitarian sector and concentrating on two areas: inflatable cold rooms that are shipped to the areas of operation together with the medicines, and container-based solar-hybrid medicine cooling.

With the SUNTAINER, developed according to the building block principle, we not only generate energy for setting up medical stations in areas without a secure energy supply. From mobile pharmacies to integrated drinking water treatment/desalination, irrigation control and machine operation (sewing, sawing, or drilling machines) for local small businesses and craftsmen as well as a local Drone Airport: The SUNTAINER can help communities develop health, water supply and local infrastructure independently and from a single source.

Our award-winning social enterprise, DOT Glasses, provides radically simplified vision care for underprivileged communities at ultra low-costs using unique vision testers and patented one-size-fits all eyeglasses. Currently serving people in remote areas in more than 12 countries, we do not have to rely on optometrists, and we create livelihood opportunities for micro-entrepreneurs. The glasses are composed of one-size-fits-all, adjustable frames with snap-in, radically simplified lenses for good-enough vision. The frames and lenses come in compact refillable kits along with basic vision testing tools (including pupillary distance measuring tools). The company also provides free training programs to individuals, local teams, and small businesses in order to prepare anyone to deliver eye care for people in the most remote areas without the need for eye doctors, expensive customization, and complicated logistics. The glasses are distributed through different methods (door-to-door field agents, fixed location, and temporary vision camps) by partnering with NGOs, governments, commercial channels (i.e. pharmacies, primary healthcare clinics), and micro-entrepreneurs. Everyone can become a DOT Glasses distributor and bring the vision to the world!
The Katadyn Group is a global corporate group with a broad brand portfolio specialized in the area of self-sufficient nutrition and drinking water supply. Operating under the maxim "Sustaining life no matter where", we at the Katadyn Group strive to meet and exceed our customers' expectations by delivering safe, simple and sustainable Swiss hydration and nutrition solutions for the outdoor, marine, tactical, emergency preparedness, humanitarian and commercial sectors. Under the brand Spectra Watermakers, Katadyn Group specializes in energy-efficient desalination systems that operate with renewable energy sources. Spectra Watermakers products are designed for open ocean vessels, offshore oil platforms, military, disaster relief, emergency preparedness and distributed infrastructure. The Spectra product line includes desalination systems that can produce up to 75m³ per day with a complete package: unparalleled engineering design, a worldwide factory-trained sales and technical service network, and a foundation firmly rooted in excellent customer service.

Founded in 1986, KTI – Plersch Kältetechnik GmbH is a family-run company based in Balzheim, southern Germany. As the inventor of the first containerized turnkey refrigeration plants, KTI has so far supplied and installed more than 4,000 such plants worldwide. Across all industries, we are the leading refrigeration specialist when it comes to reliability and quality in refrigeration under extreme conditions. We are specialists in the manufacturing of containerized solutions that find their application in various industries.

Our latest developments focus on the application of natural-friendly materials, the reduction of emissions and costs. We strive to boost sustainability. The development of a 100% future proof ultra-low temperature storage container for vaccines and other medical substances is our latest achievement. The prevention of post-harvest losses is on our agenda since we have released the concept following the Containerized Cold Chain solutions.
As a German manufacturer of water testing equipment and an international team of water quality experts LETZTEST is committed to make water quality testing an easy experience for drinking water stakeholders around the world. LETZTEST is the No.1 and most trusted choice when it comes to appropriate water quality testing equipment, training and coaching for water laboratories in regions with limited infrastructure.

We are developing, producing and distributing small scale plastic recycling machines, moulds, services and products to explore the recycling process, create new products and enable new business and skill development opportunities. This creates access to simply turn plastic waste into new, valuable products and empowers individuals, communities, businesses, etc. Combined with technical and entrepreneurship training and programs this offers endless possibilities to create impact on various levels.

The machines are in use in more than 60 countries on 6 continents. Hundreds of thousands of recycled products have been manufactured, thousands of people explored the recycling process, hundreds of income and skill development opportunities were created – and tons of plastic waste brought back into the loop.

Our consulting and project management services complete our ‘all in one-offer’ to create projects and programs according to local needs.
Polycare innovates in the fields of construction materials, building processes and architecture. Empowering people to build for themselves is our core mission. The Polyblocks and the modular assembly system embody Polycare’s core innovation to create sustainable, rapid-build solutions for homes, schools and any other buildings. We are utilising low-cost and local building materials, such as waste sands, to build strong structures that are adaptable to changes in living situations. 60% CO₂ emissions are saved per house and zero water is used during the manufacturing and building process. This method of building is superior in all aspects compared to building with bricks and mortar or cement-based concrete. By providing a circular concept for shelter solutions, Polycare offers a resilient concept for decent, durable and safe transitional housing for refugees or to provide a quick start to a new life after returning to a devastated post-conflict environment.

Power-Blox AG is an award-winning Swiss renewable energy tech company that has developed and patented a frugal and universally applicable technology platform. Power-Blox was created to be a building block to solve the energy problems of around one billion people worldwide. The core product is the PBX-200, a mobile and modular renewable energy and storage solution. The PBX-200 has an output of 200 W and an integrated 1.2 kWh battery that is charged by a PV module, for example. If more power is needed, up to 50 Power-Blox can be connected within minutes to deliver up to 10 kW of AC and DC power. Power-Blox has a track record especially in disaster relief, rural health center and off-grid village electrification. For example, the PBX-200 was used by the Swiss Development Cooperation after the earthquake in 2018 on the Indonesian island of Sulawesi to provide electricity to communication devices, the mobile water testing laboratory, and the electrolysis of chlorine-based disinfectant for drinking water disinfection.
Sustainable Solar Systems Pty (Ltd) “SustainSolar” is a leading technology integrator of high quality, turn-key containerized solar PV and battery energy storage systems (BESS). SustainSolar’s core business is designing, manufacturing, commissioning, and servicing its modular and innovative range of containerized systems suitable for various applications such as off-grid, mini-grids, rapid deployment, and energy storage (e.g. back-up, self-consumption optimization, etc.). Our systems are designed to integrate with various technologies such as water pumping, water treatment, refrigeration, drying, thus providing complete solutions to match our clients’ needs.

To date, SustainSolar has deployed equipment to 15 privately owned sites across Africa providing 300+ connections on average per site. Our systems are made of world-class components, and manufactured in Cape Town – a leading logistics hub with global shipping lines and excellent road networks into the sub-Saharan region.

WaSH Innovation provides portable water-saving devices for personal hygiene. We dedicate our kits to everyone who has or may have a problem with access to running water for personal hygiene purposes caused by external factors such as natural disasters, military operations, or other similar causes. Our products – Pocket Bath/ HandyShower, Pocket Sink/ CampTap, and HandyShattaf – are new solutions tested in a real environment, with a demonstrated potential of adaptability and scalability under different humanitarian aid settings and responding to the needs of those in the most vulnerable situation. The most important features of our devices are: lightweight, easy to transport, quick to install, convenient to use, water-saving, and the possibility of contactless hand washing in almost all conditions.

The quality and sustainability of our products are based on the application of advanced technologies, including the technological components, affordability, and improved cost-effectiveness for beneficiaries and organizations responding to the crisis.
Established in 2006, ARE is the only global business association that represents the whole decentralised renewable energy (DRE) sector for integrating rural electrification in developing and emerging countries. With more than 185 Members, ARE supports and promotes the private sector-driven markets for sustainable electricity services, creating jobs and powering equitable green economies.

The services and benefits provided by ARE include market intelligence, networking & business development, policy & advocacy, and communications & marketing. ARE Members range from as small as start-ups to big corporates. The expertise and work profiles of the ARE Members are well spread across the DRE sector focusing on all the technologies available within the renewable energy value chain such as hydro, solar, wind, bioenergy, energy storage, and power components.

Among other important topics, DRE in humanitarian and development settings remains as one of the focus topics for ARE in 2022 and beyond.

Contact: Mr. Deepak Mohapatra (d.mohapatra@ruralelec.org), Senior Officer, Business & Market Development, ARE to learn more about how you can benefit from its services and offerings.