

Building Viable Business Models for Small and Medium-sized Enterprises

This paper highlights the roles and importance of Micro, Small and Medium-sized Enterprises (MSMEs) in the sanitation, water and resource management sector and the challenges they face.

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Abstract

This paper highlights the roles and importance of Micro, Small and Medium-sized Enterprises (MSMEs) in the sanitation, water and resource management sector and the challenges they face. Secondly, it introduces cewas, the Swiss-based competence centre linking sustainable water, sanitation and resource management with business development. cewas was founded as a non-profit association pushing innovations for sustainable water and sanitation management and offering professional training, coaching, networking and consulting to bring sustainable business ideas to fruition. In cewas Start-Up Programmes, 92 businesses have been developed in various sub-sectors aiming to tackle water and sanitation challenges. 67% of the start-ups are still actively implementing their business. With tailored Business Matchmaking Services, cewas facilitates the creation of new markets and connects local service providers with innovative products and funding. When going through organisational changes, utilities and other sector organisations can draw upon the Integrity Management (IM) Toolbox which has been co-developed by cewas to identify integrity risks and turn them into business opportunities.

Business expertise in sanitation, water and resource management

Water, sanitation and resource management constitute an increasing and pressing global problem. Both North and South face challenges related to climate change,

dwindling (water) resources, pollution, unsustainable resource management and unaffordable conventional infrastructure. The Joint Monitoring Programme (JMP) update from 2017 estimated that still today, 2.1 billion people do not have access to safe drinking water. The JMP also states that 4.5 billion people (62% of the

Key facts of the cewas Start-up Programmes:

cewas trains and coaches water and sanitation entrepreneurs in its start-up programmes:

- Throughout year-long Start-up Programmes, entrepreneurs develop an idea, create a business model, pitch to key sector actors and start to implement their business.
- Main focus: entrepreneurial skills, personal support and in-depth sector knowledge, creating an international network of experts
- Start-ups are active in sub-sectors: WASH, Sanitation / Wastewater, Water supply, Water Resource Management, Waste or other sub-sectors adjacent to water and sanitation
- Start-ups tackle water and sanitation issues with business types including: consulting, capacity development, services, products, advocacy and awareness or others
- 92 start-ups from 21 countries participated between 2011 and 2017
- 67% of the start-ups still actively implement their business idea
- In 2013, cewas launched a compact version of the start-up programme to reach participants from low- and middle-income countries
- 172 entrepreneurs from 114 MSEs participated in cewas-led Start-up Programmes in the Middle East, South Asia and Southern Africa

global population) have no access to safely managed sanitation, and 17% or 2.3 billion people lack even basic managed sanitation services (basic toilets) (JMP, 2017). These enormous challenges cannot be solved neither by conventional solutions from the industry nor by development and humanitarian aid alone: young and motivated entrepreneurs with fresh ideas are needed.

Based on their shared conviction of this need, Swiss and international experts teamed up to establish cewas. cewas empowers individuals, organisations and businesses to develop and implement sustainable solutions for the global water sector. One of cewas' key activities is the cewas Start-Up Programme, geared at young professionals that dream of putting business ideas in water and sanitation into practice but do not know how. The programme develops entrepreneurial skills in sustainable sanitation and water management and emphasises on personal support combined with in-depth sector knowledge and access to an international network of experts and partners. Since 2011, the cewas Start-Up Programme brought forward 92 start-ups from 21 countries. To directly reach participants from low- and middle-income countries, cewas launched compact versions of its start-up programme in the Middle East, South Asia and Southern Africa.

Opening new markets poses a great challenge for any business. A lack of resources, local business partners, market knowledge and networks make for a difficult market entry and heightened risk. Since 2016, cewas offers Business Matchmaking Services in the shape of structured, guided processes that facilitate market access for MSMEs and help establish North-South or South-South business partnerships.

The water sector worldwide faces many integrity challenges, which can be understood as violations against transparency, accountability or participation. To address these integrity challenges in the sector, cewas partnered up with the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH and the Water Integrity Network to develop the Integrity Management (IM) Toolbox. With an underlying business perspective approach, this toolbox aims at realising performance opportunities and advantages that arise from improving integrity within water organisations during a 2-year change process.

Challenges for SMEs/Role of SMEs in the global water and sanitation sector

With the launch of the Sustainable Development Goals (2015-2030), the international community aims to secure access to improved water and sanitation services for all as well as better water quality, water-use efficiency, resource management and improved water-related ecosystems (Goals 6) (United Nations, 2017). To reach these goals, the OECD considers MSMEs to play a crucial

role as providers of employment opportunities. Not only do entrepreneurs provide employees with an income which allows access to basic services, they are also increasingly playing a role in addressing societal needs through market mechanisms. Regarding this, particularly social enterprises contribute to delivering public goods and services such as healthcare or waste management while often employing people at the margins of the labour market (Kamal-Chaoui, L., 2017).

Nevertheless, despite their important role as employer and service delivery, businesses in the water and sanitation sector face difficulties in viability due to limitations in demand, lack of business and technical skills and financial challenges such as access to credit. Another finding highlights poor marketing and poor coordination which could reduce value chain costs (Gero et al. 2014) of products for safe water and sanitation.

Coaching entrepreneurs in water and sanitation

To tackle the water and sanitation crises and overcome the lack of innovation and capacity in the sector, cewas supports individuals, organisations and businesses so that they can act on global challenges in water and sanitation, resource recovery and reuse. The focus lies on developing and spreading innovative ideas and business models that are economically viable, socially responsible and ecologically sound. cewas is a lean organisation which is built on maintaining partnerships, and is actively



Figure 1. Toilet design workshop with children (source: Mosan 2017).

involved in cooperating with organisations leveraging financing for water and sanitation. For example, the Swiss Bluetec Bridge which strives to accelerate sustainable access to safe water for people at the base of the social pyramid (BoP) in developing and emerging countries and supports Swiss SMEs that own innovative technologies, processes or services and are willing to adapt them to the specific needs of under- or unserved customers in BoP markets.

Today, cewas supports water and sanitation entrepreneurs and start-ups around the world through various programmes:

cewas Start-Up Programme Switzerland

Initiated in 2011, the annual cewas Start-up Programme in Willisau, Switzerland, was the first of its kind. The programme targets young entrepreneurs and consists of sector relevant lectures providing the knowledge that allows participants to develop an idea, create a strong business model, pitch the idea to the water sector at the International Water Week in Stockholm, develop the idea and manage the business model. Expert coaches provide one-on-one coaching such as technical or business advice, introduce the start-ups into their network and assist with funding options. The community of experts, start-ups and alumni can make use of the formation of clusters which leverage synergy potentials or help to acquire projects collaboratively. The programme lasts for one year and so far, 54 start-ups and SMEs have participated (cewas, 2018).

Industrial designer Mona Mithab, for example, founded the Switzerland-based start-up Mosan (www.mosan.ch). The social business develops circular sanitation systems, including user-friendly Urine Diverting Dry-Toilets (UDDTs) for private in-home use. cewas supports Mosan with profound coaching, workshops and a broad network. With support of the Swiss Bluetec Bridge initiative, Mona and her team currently work in Guatemala, where they collaborate with Mayan communities and local partners to implement their market-based sanitation solution, adapted to local needs and demand.

cewas Middle-East for Humanitarian WASH

The WASH crises in the MENA (Middle East and North Africa) region:

Worldwide, the Middle East is the most water-scarce region struggling to meet the basic water and sanitation demands of its rapidly growing population. The on-going Syrian and Iraqi conflict have created a devastating humanitarian crisis with millions of people displaced both within the countries and to neighbouring countries. The situation is even more critical as refugees and displaced populations are acutely vulnerable, and increasing pressure is put on the resources of host communities (World Bank 2018). Adding to that, youth



Figure 2. Field trip to a decentral sanitation system (source: Cewas Middle East 2017).

unemployment in the Middle East ranks highest in the world, which further contributes to its instability and increased vulnerability (World Economic Forum 2014).

To address the pressing WASH crises in the MENA region, cewas implements a multi-faceted project that trains and supports local entrepreneurs and humanitarian WASH

„My ambition of improving the environmental norms in Jordan has a three steps approach.“ O. Hammad, Turjumaa

actors in the region to develop innovative, locally adapted water and sanitation solutions for refugees and host communities. Since 2015, 62 entrepreneurs of 33 businesses participated in the cewas Middle-East Start-Up Programme.

The start-up Turjumaa, founded by Owice Hammad, is specialised in translating and creating materials in Arabic which are related to water and sanitation. Turjumaa translated some basic resources which will help enable the start-up to foster capacity building and awareness raising among the community, the first step to achieving their goal. Envatech, on the other hand, is an educational environmental start-up that aims at raising knowledge on environmental challenges and impacts among locals, policy makers and youth using Virtual Reality tools and applications.

cewas Smart Start-up Programme

In 2013, following the success of the Swiss cewas Start-up Programme, a lean business development programme was developed and successfully tested in cooperation with the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH Reform of the Water Sector Programme in Zambia. In 2016, cewas joined forces with seecon (a Swiss consultancy company that creates innovation for sustainable development), the Namibia University of Science and Technology’s (NUST) Namibia Business Innovation Institute (NBII), ICRD Group Foundation and the Water and Sanitation Association of Zambia (WASAZA). Together, they implemented a



Figure 3. Countries in which cewas Start-Ups were founded (MAPCHART 2018).

series of business development activities aiming to make sustainable business ideas in sanitation, water and resource management in Namibia, South Africa and Zambia a reality. Those activities were implemented in the context of a development partnership with seecon that is part of the develoPPP.de programme, which GIZ implements on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ).

Through training and coaching, cewas Smart Start-up Programmes aim to increase the proficiency of start-ups, small business owners and entrepreneurs in promising business models in sanitation, water and resource management. The model of the Smart Start-up Programme has since been implemented in other countries, as visualised on the map below.

Between 2013 and 2017, 172 entrepreneurs from 114 start-ups and MSEs participated in the smart start-up programme.

Coaching champions with entrepreneurial solutions

SwissRe Foundation, in cooperation with cewas, supports high-potential sanitation and water entrepreneurs through various programmes: The Junior ReSource Fellowship aims to support young dedicated graduates, disruptive innovators and change-makers to develop their convincing ideas to foster resilience in the water sector; the International ReSource Award for resilience in water management acknowledges social entrepreneurial thinking and leadership in implementing the principles of sustainability in water management.

The 2018 winner of SwissRe Foundation’s ReSource Award was the Guatemalan entrepreneur and astronomer Antonio Aguilar with his business CASSA. CASSA builds affordable social housing with local materials such as bamboo and includes solar energy, rainwater harvesting, and grey- and blackwater treatment. After building a dozen houses the goal of the prize money is to up-scale the sales. cewas helped CASSA identify key previously-unexpected challenges that might occur while developing and strengthening their business. For example, maintaining quality standards will be a major factor for success. Additionally, CASSA learned how to formulate a better framework for the residential waste water treatment systems - within industry standards and with a scope for constant improvement.

«With the support of cewas we improved how to frame and communicate the impact and value of our housing solutions to potential stakeholders.» A. Aguilar, CASSA

Looking back: figures and numbers on the Start-Up Programmes and coachings.

The world map above (Figure 3) shows the countries where start-ups were founded or coached in the Swiss or Middle East yearlong Start-Up Programmes, or the winners received coaching by programmes of the Swiss-Re Foundation between 2011 and 2017 (small countries: Guadalupe, Trinidad and Tobago, Palestine). The entrepreneurs and NGOs are active in various sub-sectors such as WASH, sanitation, water supply, waste management and others (Figure 4, sub-sector).

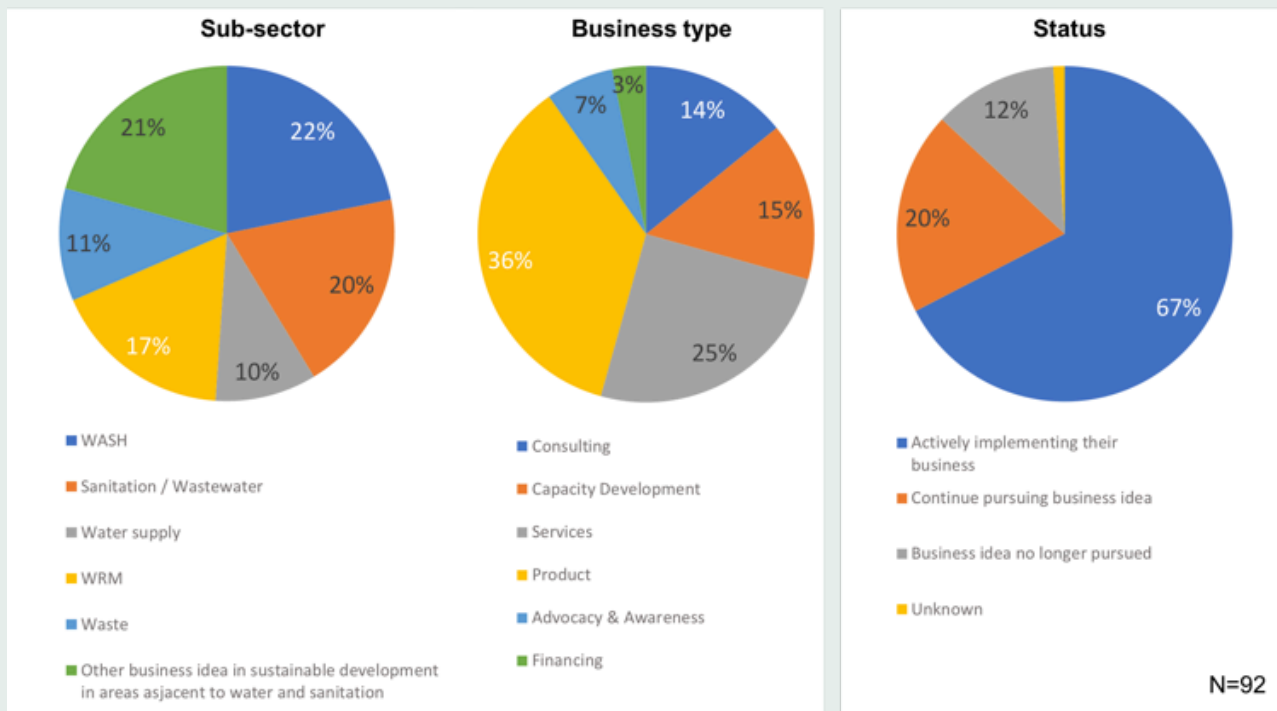


Figure 4. Sub-sector, business type and status of the 92 cewas start-ups (source: cewas 2018).

Start-ups aim to tackle the sector challenges they face with various business types including consultancy, capacity development, products such as floating isles that absorb nutrients from water bodies (Phoster GmbH), or they focus on advocacy amongst others (Figure 2, business type). Of all start-ups initiated between 2011 and 2017, 67% are still actively implementing their business idea and 20% still pursue the idea. Only 12% of businesses are no longer pursuing their idea.

Business Matchmaking Services

The lack of resources, local business partners, market knowledge and networks are factors that make market entry very challenging. Since 2016, cewas offers structured and guided Business Matchmaking Services for MSMEs from around the globe with the aim to facilitate the scaling of best-practices and identify innovative solutions to local challenges in the water sector. The target group comprises not only Swiss and European technology and service providers seeking new markets in countries like Namibia, Zambia or South Africa. It also includes SMEs from Southern countries looking to diversify their portfolio of goods and services and to identify innovative solutions to local challenges in the water sector.

Integrity Management Toolbox

Finally, irregular procurement processes, illegal connections, collusion of officials with informal water cartels, and falsification of invoices and accounts are all serious integrity challenges that water sector organisations face on a daily basis. Such risks can damage an organisation’s reputation, and in the worst

cases seriously affect their bottom line. While there are some initiatives addressing related issues in policy and legal frameworks, until now there has been little practical guidance for water sector organisations to tackle these problems at the organisational level.

The Integrity Management Toolbox co-created by the Water Integrity Network, GIZ and cewas was designed to support organisations in making integrity a part of their strategic plans, business models, and - most importantly - their daily practices to reduce risks and improve performance. The toolbox entails a change management approach that range from assessing organisations’ performance and describing their business model to identifying the most relevant integrity risks, using practical tools for better managing risks, and finally to monitoring performance improvements. The outcomes can reduce costs and bring “lost money” back into their operations, minimise reputational and legal risks and increase accountability to customers, stakeholders, public authorities, and partners. The toolbox targets utilities, SMEs, public institutions and other water sector stakeholders (Integrity Management Toolbox, 2017).

Closing remarks

This paper points to the need for innovative business models in a challenging sanitation, water and resource management sector. The international centre for water management services, cewas, was found to address this need. Up to today more than 92 start-ups worldwide have been coached, of which 67% are still

actively implementing their businesses. Between 2013 and 2017, 172 entrepreneurs from 114 start-ups and MSEs participated in the smart start-up programme. By facilitating business matchmaking, cewas supports cooperation, funding and knowledge transfer towards this sector. The integrity management toolbox is used as a tool to address the integrity risks that often occur in the water sector, and aims at turning them into business opportunities.

In the following chapters of this journal, five entrepreneurs, foundations and NGO's present their innovative solution to tackle water and sanitation issues. All of them were coached by cewas in various stages of their development, from ideation up to support for up-scaling the product or service.

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