2019 Annual Report

Engineers Without Borders Netherlands

Stichting Ingenieurs Zonder Grenzen
Message from the Board
Petra Beris (ex-Chair) & Antonio Menezes (new chair)

Imagine Charles, a 32 year old african guy that has graduated from a local university. He is a sympathetic, smart and social person, always willing to help his small community. He studied both economics and agroforestry and all the theory from university made him wonder how to produce enough affordable food while keeping our planet earth healthy.

There is not so much difference in this thinking with Tim, who graduated in the Netherlands from the same studies and is thinking about the same challenge. They both have ideas about setting up a new organic farming business.

However there is a big difference. To set-up a business and make sustainable impact, you need other people with specific knowledge to support you. Also you need financial means. Charles doesn't have access to this needed knowledge and financial means to realise this dream. While Tim has many opportunities from his network in Europe.

At EWB-NL we believe that we can really make an impact by supporting Charles, and potentially connect him to people like Tim. Together we can make changes happen and that is why we all volunteer to make these things happen.

EWB-NL has grown over the past 4 years to a community of over 700 registered volunteers and a fully operational organisation poised to deliver projects in developing countries by supporting local entrepreneurs and communities with our knowledge and skills.
Message from the Board
Petra Beris (ex-Chair) & Antonio Menezes (new chair)

In 2019, it became clear that we had to create some focus as an organization and thus the idea of our 4 portfolios came to life. Now EWB-NL will focus on 4 main areas of impact with our local partners, Circular Economy, Water, Energy, & Education. This will enable us to effectively use the resources we have to make the biggest possible impact. This will also facilitate our search and communication with strategic partners.

The end of 2019 marked a major change in the board of EWB-NL, with more than half of volunteers on the board moving on to new endeavours. In addition to the restructuring of various parts of the organisation, we have added Impact & Sustainability as a strategic pillar so as to ensure focus for 2020. We have some very new faces on the new Board but we are confident that that they will be able to continue to make an impact as a team and give assistance to projects in developing countries to improve well-being with Engineering.

We have no doubt that 2020 will be another important year in our history!
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EWB NL Organisation

Organogram

100+
ACTIVE VOLUNTEERS
>60% International
>40% Female

5+
KEY PARTNERS

100+
COMMUNITY MEMBERS

2.000+
FOLLOWERS
<table>
<thead>
<tr>
<th>EWB NL Organisation</th>
<th>Responsibilities Strategic Board Members</th>
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<tr>
<td>Chair</td>
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<td>HR Team</td>
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<td>Revolving Fund</td>
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<td>Chair meetings</td>
<td>- Chair meetings</td>
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<td>Lead fund strategy</td>
<td>- Lead fund strategy</td>
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<tr>
<td>Ensure ANBI requirements</td>
<td>- Ensure ANBI requirements</td>
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<tr>
<td>Ensure the effective and efficient functioning of the board and organisation</td>
<td>- Ensure the effective and efficient functioning of the board and organisation</td>
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<tr>
<td>Represent the general organisation to external stakeholders (figurehead)</td>
<td>- Represent the general organisation to external stakeholders (figurehead)</td>
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<tr>
<td>Acts as backup for the treasurer</td>
<td>- Acts as backup for the treasurer</td>
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<td>Ensures minutes of meetings are made and keep the MoM filing up to date</td>
<td>- Ensures minutes of meetings are made and keep the MoM filing up to date</td>
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<td>Develop &amp; Implement EWB HR Strategy</td>
<td>- Develop &amp; Implement EWB HR Strategy</td>
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<td>Treasurer</td>
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<td>Financial Team</td>
<td>- End responsible for budgets</td>
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<td>Supervisory Board</td>
<td>- Determine and execute financial policy and execute board decision exceptions</td>
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<td>- Manage finance (bank account)</td>
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<td>- Prepare annual budget</td>
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<td>- Prepare annual account</td>
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<td>- Process financial declarations</td>
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<td>- Review and approve project budgets</td>
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<td>- Manage access to the financial system</td>
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<td>Community</td>
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<tr>
<td>Events Team</td>
<td>- Develop and deploy the EWB Communication Strategy (internal and external).</td>
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<tr>
<td>Communication/PR</td>
<td>- Develop and oversee the HR strategy</td>
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<tr>
<td>Community managers</td>
<td>- Spider in the web to connect people in the organisation</td>
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<td>Graphic Design Team</td>
<td>- Connect the different communication teams and facilitate collaboration through the organisation</td>
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<tr>
<td>Website/IT</td>
<td>- Coordinate SDG Impact measurement and the development of the framework</td>
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<tr>
<td>Projects</td>
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<tr>
<td>Request coordinator</td>
<td>- Oversee projects and strategic developments</td>
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<tr>
<td>Portfolio Managers</td>
<td>- Escalation point for local partners in case of big issues</td>
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<tr>
<td>QHSE Team</td>
<td>- Final accountability for the execution of the projects (safety, performance, quality and timeline).</td>
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<td>SEG Team</td>
<td>- Organise the communication within the projects lead team (PPMs, QHSE, SEG and request coordinator(s))</td>
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<td>Partnerships</td>
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<tr>
<td>Partnerships Team</td>
<td>- Delineate strategy for partnerships and coordinate with other parts of the organization.</td>
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<tr>
<td>Business Impact team</td>
<td>- Ensure the partnering</td>
</tr>
<tr>
<td>Impact &amp; Sustainability</td>
<td>- Ensure the effective communication within the partnerships team</td>
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<tr>
<td>Impact Measurement</td>
<td>- Support in the set-up of the revolving fund in the partnering strategy</td>
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<td>- Link BIT within the organisation as strategic part of development</td>
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<td>- Ensure long-term strategy for increasing impact through the EWB-NL projects</td>
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<td>- Ensure long-term strategy for integrating sustainability in the EWB-NL projects</td>
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<td></td>
<td>- Coordinate SDG Impact measurement and the development of the framework</td>
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<td></td>
<td>- Make connections between EWB-NL teams to communicate about the realised impact (internally and externally, e.g. as input for the Annual Report)</td>
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EWB NL Organisation

EWB NL Board

Petra Beris
Felipe Chies
Wessel Wikkerink
Tessa Vaendel
Irina Sleikina
Georgiana Stan
Alejandro Hahn

Supervisory Board

Maurits Ertsen
Roel Tersteeg
Tjeerd Dierckxsens

Senior Expert Group

Eugene Bongers
Joseph van Oudenhoven
Maarten Romijn
Piet Dijkshoorn
Rene van Dijk
Our Projects - Year Four
Irina Sleikina (Board Member, Projects)

We’ve spent 2019 laying a foundation for Project Portfolios and creating the structure for future expansion by focusing on 4 knowledge clusters. Last year we welcomed new Portfolio Managers for Energy, Education and Circular portfolios. In the same year, the role of board member for projects has transitioned from Georgiana Stann to Irina Sleikina.

As EWB-NL entered its fourth year of operations – we added 5 more finished projects to our portfolio. We delivered real solutions which are functional and are now in the full ownership of requested parties In the year 2019, our volunteers visited Uganda, Mozambique, Madagascar, and the Philippines, where they worked side-by-side with communities and brought to life engineering ideas which were born in the Netherlands. We’ve entered 2020 full of enthusiasm and energy to multiply project impact through developing and streamlining the project request channel, expanding the talent pool in each Portfolio and ultimately – accomplishing more projects in 2020!

1 goal: to improve well-being for all
6 projects running
9 projects closed
2 new projects starting
4 knowledge clusters
X project volunteers
X people impacted
Our portfolios

Energy portfolio
2 ongoing projects
3 new projects

Education portfolio
2 ongoing projects
0 new project(s)

Water portfolio
3 ongoing projects
3 new projects

Circular portfolio
1 ongoing project
4 new projects
Some of our transitioned projects

**Energy Portfolio**
- EOSOL (Madagascar)

**Water Portfolio**
- Water4Sovu (Rwanda)
- Water4Oku (Cameroon)

**Other**
- Nut Cracker (Niger)
- Art House (Liberia)
- Diamond valuation & traceability (Ivory Coast)
Energy Portfolio

Most of the developing countries are abundant in renewable energy resources (i.e. solar, water, wind, etc.). However, the local communities do not possess the knowledge or experience to create systems that can harness this potential. Through our ENERGY Portfolio projects we address the need of reliable, clean and affordable electricity in these countries, especially in isolated rural areas with no outlook for future electrification. We strongly believe that by working in close collaboration with our local partners we can build on their expertise and enable their communities to create and manage their own renewable energy systems. 

Looking ahead, we hope that in 2020 we can secure the grant of an ambitious project, Togo Pico Power, which aims to electrify in its first phase 34% of a small village, as well as to serve as an inspiration for the neighbouring communities.

SDG 4, target 4.3: Ensure equal access for all women and men to affordable and quality technical, vocational and entrepreneurial education.

SDG 7, target 7.1: Ensure affordable, reliable and modern energy services. Substantially increase the share of renewable energy in the global energy mix.

Project: Togo Pico Power - EmPowering People with Solar Energy

FINANCIALS: 150,000 euros
SOCIAL IMPACT: increase rural electrification from 7 to 34%
ENVIRONMENTAL IMPACT: reduce CO₂ (displace unsustainable energy resources such as kerosene, diesel, etc)
VOLUNTEERS INVOLVED: 7
LOCAL PARTNER: JVE (Jeunes Volontaires pour l’Environnement)
PROJECT DURATION: on going

Kodje, Togo
Projects within energy portfolio 2020

**Togo Pico Power - EmPowering People with Solar Energy**
Location: Togo
Local partner: JVE
Start: 2018
Status: Execution phase

**Ilijan Buildup – Solar Water Pumping**
Location: Philippines
Local partner: Municipality of Poro
Start: 2018
Status: Finalized
Education Portfolio (Schools of the Future)

- Goal: spark children’s interest in technology and science in developing countries
- The SotF portfolio runs projects in schools in both Uganda and Mozambique
- Knowledge is one of the best ways to enable children in Uganda and Mozambique to have a chance for a better and brighter future. These workshops in science and technology aim to spark their interest in the field and ultimately create opportunities for the development of their country.
- The SotF portfolio contributes to the UN SDG to provide Quality Education for everyone

Highlighted Project

Schools of the Future - Mozambique

- For our latest iteration in Mozambique (2019) we used the previously gathered knowledge and once again focused only on one school and delivered a 3 week-long workshop, where the students were able to solder and assemble a piano.
- We partnered with the Technical University of Eindhoven beforehand to better prepare the iteration, both in terms of pedagogical knowledge and literary material arrangement.
- We were also able to find the opportunity to connect with native university students to further improve the project’s sustainability and awareness.
Highlighted Project: Schools of the Future - Uganda

- **2019** has meant a lot for the project. For the first time we have set foot on Ugandan soil and visited the schools, met the partner organisation (K4C), the teachers and the kids. We visited 5 schools all in the relative surroundings of Masaka and built up relationships for the future. A truly rewarding fieldwork trip!

- In the Netherlands, the focus was mainly on developing the workshop kits. We aim to teach and supply at least 3 different workshop kits of which 2 are nearing completion, while a third one is still under construction.

- **2020** would have been the big year where we would have executed our workshop programme in Uganda in the summer. Unfortunately, as in the rest of the world, we had not anticipated the Corona-virus pandemic. Plans for the summer were cancelled and future travel on hold until we get more information from our partner organisation regarding the school year 2020/2021. **Our main goal for 2020 will be to finish the workshop, testing it at Dutch primary schools as well as refugee camps. Then we will focus on acquiring more funding.**
Projects within Education Portfolio 2019

**Schools of the Future - Uganda**
- Location: Uganda
- Local partner: Knowledge for Children
- Start: March 2018
- Status: Execution phase
- Number of volunteers: 4

**Schools of the Future - Mozambique**
- Location: Mozambique
- Local partner: AVSI
- Start: August 2016
- Status: Execution/Wrap-Up phase
- Number of volunteers: 14
Circular Economy Portfolio

We are very proud of the new portfolio covering the topic of Circular Economy initiated in 2019. In the Netherlands many innovative ideas and promising initiatives have emerged over the last few years to move from a linear to a circular model. We believe that the circular economy is a huge opportunity for developing countries. The knowledge and experience we have gained in the Netherlands by developing circular solutions could be used as leapfrogging technologies for our local partners and their communities. Furthermore, in developing countries, and mainly in the informal sector, there are already many circular solutions in place. These solutions are not labelled ‘circular’, it is just the most logical approach. This serves as inspiration on what would be the best circular approach in different contexts. By working on circular projects together with our local partners, we can learn from each other and contribute to creating a global circular economy!

In 2019, we had 3 initiatives within the circular economy portfolio. See more details on the next page.
Corn Cob Waste Valorization

The first initiative kicked off in early 2019 based on a Design Lab we organised in collaboration with Africa in Motion in 2018. In this Design Lab, volunteers worked on options of valorisation of corn cobs for our local partner Kumwe, a post-harvest processor of corn in Rwanda. The lab led to three promising ideas: using the waste as briquettes, as a water filter, and as construction material. As part of the 2019-project, the team worked out these initial ideas in a pre-feasibility study and established a structured approach to further initiate these ideas. This helped our local partner Kumwe with their grant proposal to get funding to cover equipment costs.

This was the first EWB NL project in the field of circularity, which helped shape our ambition for a dedicated portfolio.

Banana Waste Valorization

The second initiative also started as a result of a Design Challenge organised by EWB and Africa in Motion, this time held in April 2019. Volunteers looked into the valorisation of waste from banana plantations. This resulted in the potential use of spent material as biobased textile products, such as bags out of banana waste fibers. A promising idea for which Africa in Motion is looking for local collaboration partners to continue the initiative.

Bionexx Going Circular

The third initiative, ‘Bionexx going Circular’, kicked-off in the summer of 2019. We started with our collaboration with Bionexx, an extraction company producing a malaria-drug component from plants in Madagascar. Due to a previous fruitful collaboration with the Bionexx investor as part of the Eosol project, we had a headstart with a reliable partner. With the intent to establish a long-term partnership for the circular portfolio project, two volunteers visited the facility in November 2019 to identify potential solutions for making the production more sustainable. This resulted in six projects for the Energy and Circular Economy portfolios for 2020.
Projects within Circular Economy
Portfolio 2020

- **Corn cobs waste valorization**
  - Location: Rwanda
  - Local partner: KUMWE
  - Start: Design Lab in Sept 2018
  - Status: finished (after proposal)

- **Bionexx Going Circular**
  - Location: Madagascar
  - Local partner: Bionexx
  - Start: Feasibility study in Nov 2019
  - Status: Execution phase

- **Banana waste valorization**
  - Location: Rwanda
  - Local partner: N/A
  - Start: Design Challenge in April 2019
  - Status: currently on hold
Our Community
Fernanda González Guevara (Board Member Community & Communication)

Our volunteers are at the heart of our organisation. Through our activities, they connect as one community, where they support and inspire each other. *Our events are our main vehicle for bringing together our current and new volunteers.*

In 2019 more than 250 people attended:
4 Meet&Greet events, 3 Hang-outs and 1 Design Challenge (Hackathon-like event) we hosted.

The **Design Challenge** that we hosted, together with our sponsor Stedin, allowed us to tap into the pool of talent of our volunteers to propose solutions for 5 different challenges affecting developing communities. The winning team joined our organization to develop advance the proposed solution.

Check out the events on our **social media** channels [LinkedIn](https://www.linkedin.com), [Facebook](https://www.facebook.com), [Instagram](https://www.instagram.com) and [Twitter](https://www.twitter.com)
Our Partnerships
Felipe Augusto Chies (Board Member, Partnerships)

Our strategic partners have a major role in enabling our projects, by contributing both financially and with the skills, knowledge, and enthusiasm of their employees. In return, employees are given the opportunity to develop leadership and entrepreneurial skills through challenging projects and experience the fulfilment that comes with being part of improving well-being in developing countries.

If you are an individual or company who would like to create a sustainable change please contact us: partnerships@ewbnl.org
Some of our partners in 2019 – Thank you!

Strategic Partners
Long-term financial support

Project Partners
Financial support to specific projects

Focus Partners
Other forms of support
Financials
Wessel Wikkerink (Treasurer)

In 2019, we managed to secure funds to execute our projects that were already in-progress and to create cash reserves needed to kick off new ones, until they can operate with their own budgets from donations.

In 2020, we will use these reserves to support the start of new projects, making us more agile by smoothing this serious starting constraint that would routinely introduce uncertainty within our timelines and effectiveness.

Find our detailed Financial Report on our webpage!

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<tr>
<th>REVENUE (EUR)</th>
<th>EXPENSES (EUR)</th>
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<tr>
<td>Donations</td>
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<tr>
<td>8.496</td>
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<tr>
<td>Project Donations*</td>
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<td>53.484</td>
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<tr>
<td>*48.136 are earmarked for specific projects</td>
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<tr>
<td><strong>Total revenue</strong></td>
<td><strong>Total costs</strong></td>
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<td>56.733</td>
<td>19.653</td>
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Organisation 2.225
Teams 133
Projects 17.294
Our planned impact for 2020

In 2020, to measure our contribution to the UN SDGs, we will start the implementation of the SDG framework and will perform impact measurements using specific indicators. Our projects mainly contribute to SDG 4, 6, 7 and 12, which are aligned to our current project portfolios. However, other SDGs are indirectly addressed through our projects. Such as, SDG 3 (Good health and Well being), SDG 9 (Industry, Innovation and Infrastructure), SDG 10 (Reduced Inequalities), SDG 11 (Sustainable Cities and Communities), among others.

Energy portfolio
2 ongoing project
3 new projects

Education portfolio
2 ongoing projects
0 new project(s)

Water portfolio
3 ongoing projects
3 new projects

Circular portfolio
1 ongoing project
4 new projects
THANK YOU!

*We thank* our volunteers, partners, donors and the EWB-NL community for their continued support in helping us to make a positive impact and in turning our dream of working for a better world through technology into a reality.

*In 2020 we'll continue our efforts doing Better, Faster, and More projects which improve wellbeing around the world to clearly measure our impact!*

Sign up for our newsletter to be kept up-to-date with our work and events: [EWB Newsletter](#)

[www.ewbnl.org](http://www.ewbnl.org)  [Facebook.com/ewbnl](http://Facebook.com/ewbnl)  [Instagram.com/ewb_nl](http://Instagram.com/ewb_nl)  [LinkedIn.com/company/ewb-nl](http://LinkedIn.com/company/ewb-nl)
Appendix

This appendix describes the guidelines we use in our projects.
Our Principles

Contribute to Sustainable Development Goals

Reduce CO2

Create local sustainable businesses

New (leapfrogging) Technology

Fair volunteering support
How we work - Sustainability
Our projects adhere to the 'FIETS' criteria, which means that for each project the Financial, Institutional, Environmental, Technological and Social elements are considered.

Financial sustainability
All projects EWB engages in require an engineering base. This allows us to utilise our strengths and our skills to the best of our abilities. With our partners we will achieve healthy and sustainable results that can make a change.

Institutional sustainability
Any local entrepreneurs with an idea or a passion can request to partner with us. Together we determine the feasibility of a project and progress to the realisation of a dream. The result shall be owned and operated by the requesting party.

Technical sustainability
Our designs are often challenged to be extremely low maintenance with a long lifetime. Furthermore, they are based on sustainable concepts, inspired by the circular economy. Water, waste and energy consumption are minimised, where possible energy will be used from renewable resources.

Environmental sustainability
We strive to a positive environmental impact and keep any negative impacts as low as possible or compensate for that. For example environmental impact assessments can be part of our project scope.

Social sustainability
Our projects improve wellbeing in communities and are executed and owned by the local stakeholders. In this way local ownership is guaranteed and the project has positive social impact. To ensure social sustainability a Social Impact Assessment is part of projects. In the execution of our projects, EWB is determined not to compete with existing engineering firms. Knowledge provided or work performed by local companies is beneficial for local economic and social structures. If this is not present, EWB can help.
Project Phases

Proposal → Plan → Execution → Finish

Technical Ownership

EWB NL

LOCAL PARTNER/COMMUNITY

time
How we work - Key Design Factors

**User Centered Design**
The starting point of all systems and solutions are the local users. What are their needs and wants? Together with the user we work on the challenging interface between their requirements and affordability of the design.

**Sustainable Design**
For sustainable design we work according to the FIETS criteria; to ensure long term Financial, Institutional, Environmental, Technological and Social Sustainability.

**Integrated Project Phases**
Our design cycle starts with an understanding of operation and maintenance in a local context, followed by the possibilities of local construction, all together leading to the starting points of design.

**Safe Design**
Not because we have to, but because we want to. We feel responsible for the safety of all people working on our projects and that benefiting from it. We deliver safe designs and ensure a safe construction.

“If change isn’t systemic it isn’t change at all”

- GEORGE ROTER
How we work - Integrated Project Phases
Decisions taken during design determine construction, operation & maintenance

- Design
  - User Centered
  - Sense & Simplicity
  - Safety
  - Constructability
  - Local ownership of design

- Construction
  - Local availability of resources
  - Transport of parts
  - Import, taxes
  - Quality
  - Safe Construction
  - Training

- Operation & Maintenance
  - Identify Operators:
    - Training
  - Spare parts
  - Online monitoring
  - Local workshops
  - Procedures
Our Organisation

Strategic Teams

Strategic Board

The strategic board has the following main responsibilities:

- Ensure compliance with foundational statutes, ANBI guidelines, etc
- Establish the policy of the foundation and its yearly update
- Ensure execution of policy plan
- Ensure transparency by having finances checked by a supervisory body and published
- Make sure the operational team prepares and publishes an annual report
- Represent the foundation

Supervisory Board

A Supervisory Board of at least three members, who are not members of the board, is in place to advise and control the board to ensure the foundation meets the goals determined in the founding documents. One of the supervisory board members, with the appropriate financial aptitude, will be responsible for controlling the finances of the foundation. The supervisory board will meet at least once a year.

SEG

The Senior Expert Group consists of senior experts who are consulted for go / no-go decisions on project execution and review of (critical) deliverables such as project execution plans, bases of design, budgets, etc. The senior experts have a proven experience in project execution in developing countries. Regarding the critical deliverables they mainly look at risks involved with the design and the risks of sending the document to another party. In these they consider impact to the EWB engineers, EWB organization and the benefiting community. They can also be consulted for technical review in case the expertise is missing in a project team and the team is unable to find this expertise outside the team. SEG can help to find the right expert to review.