
CA·UK·IN
studio
IMPACT REPORT
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CONTENTS

About this report

This document outlines the social, economic and environmental impact, in line with the UN's Sustainable Development Goals we have achieved to date as well as some of our targets for the future. Our impact has been broken down into our main ethos points: Democratic Education, Quality Design and Accessible for all. Through this inaugural report we look at the related global challenges and how we can better position ourselves to combat these important social issues. Within this document we have identified important case studies, as examples of positive social, economic and humanitarian wellbeing stories that have arisen through the process of our projects.

A NOTE FROM US

FIVE YEARS OF CHALLENGES, GOALS AND LEARNING

It's been 5 years since we sat down together, as second year architecture students, and decided how we were going to use our upcoming summer break. What started out as a relatively naive idea to realise one of our own designs through building it ourselves, turned out to be a perspective changing and eye opening process, prompting the start of CAUKIN Studio. Through this first project we realised our shared ideals and ethos - everyone should have the opportunity and tools to shape the spaces they inhabit and that we should all benefit from the quality of life that is achieved through informed design. With some time now to reflect, we certainly feel we have come a long way from that playground in Cambodia.

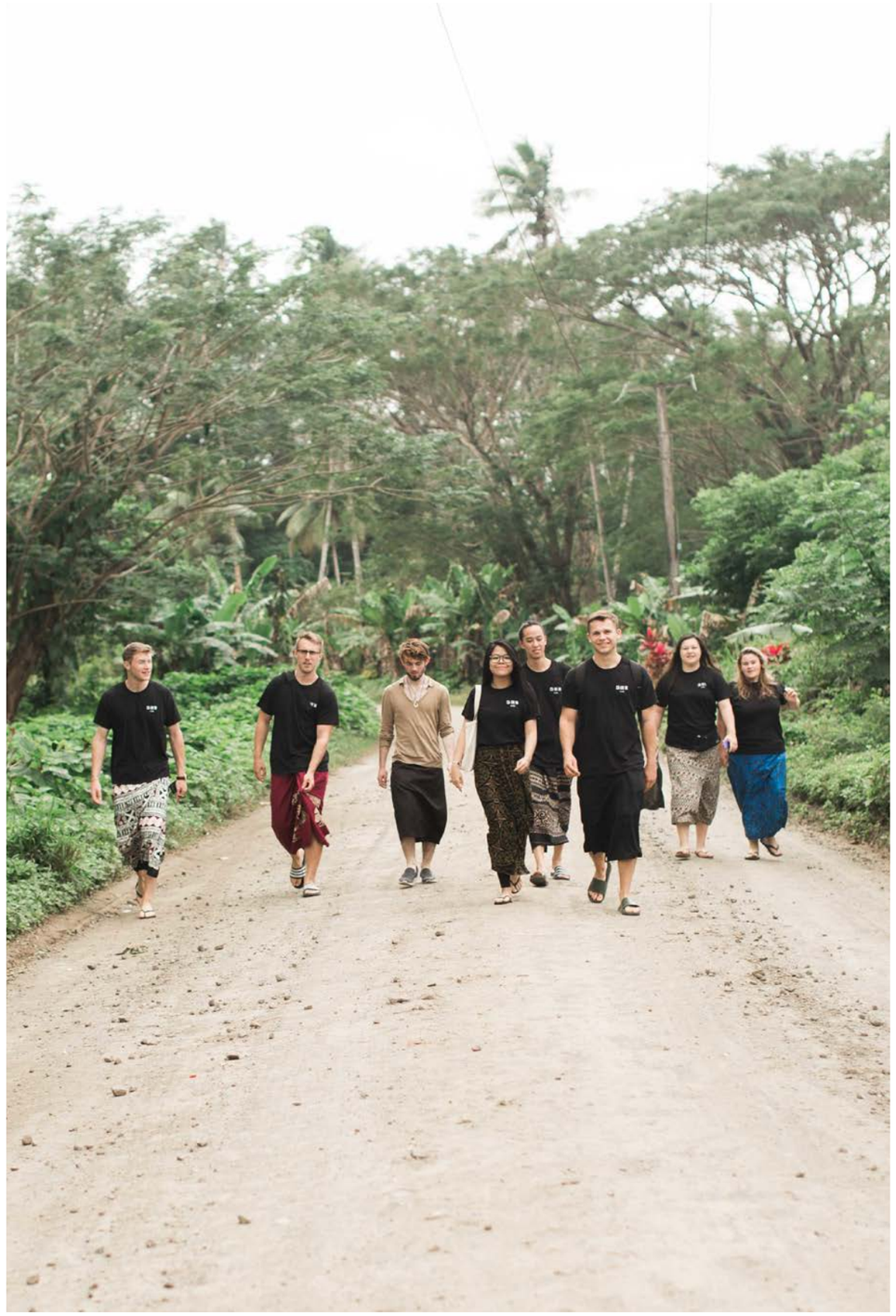
Through the completion of PLAYSCAPE in 2015, our eyes were opened to design and construction as powerful tools for social change. We learned that the success and richness of a project was intrinsically linked with the people involved and therefore the natural exchange of knowledge, skills and friendship throughout the process. After this project, we knew we had to do more, learn and collaborate more.

As a design and construction company, we are placed to positively affect the physical world that we wake up and see everyday. The spaces that we interact with, that we inhabit and that we walk past; the physical and mental implications of these cannot be understated. As a practice we strive to strengthen the bond between business and positive social change. In doing this our model recognises the value everyone involved possess and we, as facilitators, provide a platform for all to bring their value through collaboration.

We will continue to challenge the way people consider buildings, how they are built, who is involved and how we can work together. We firmly believe buildings are opportunities for a rich, beautiful, educational process not merely a final outcome and we hope that by working together we can take these opportunities to make real change.

We have certainly come a long way- but know that we still have a long way to go. Offering an alternative narrative in an industry where financial goals and profit for the few, come at the expense of the many, is no easy task, but we're committed to making this a reality.

Thank you to everyone who has supported us so far, we're just getting started!



IMPACT HIGHLIGHTS

23
PROJECTS COMPLETED

119,080
HOURS TAUGHT ON SITE

6000+
END USERS ENGAGED

107
COLLABORATORS ENGAGED

1300
M^2 OF SAFER STRUCTURES

3
NEW BUSINESS STARTUPS

368
EXPERT HOURS

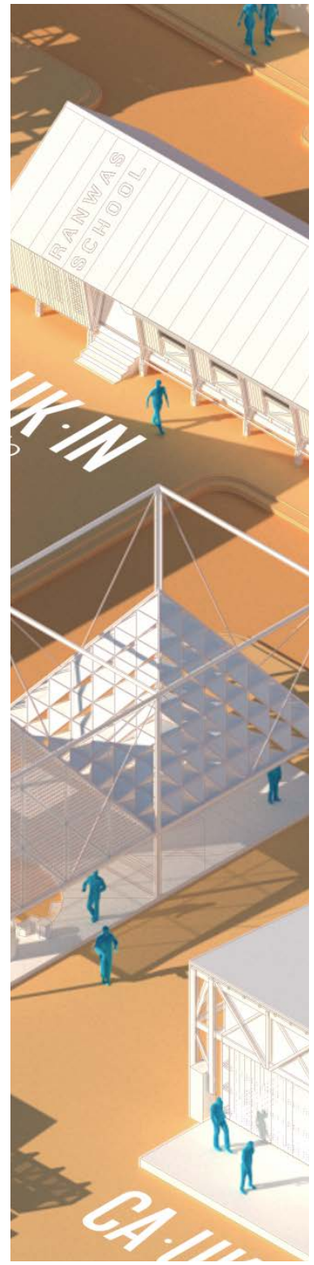
50km
MATERIAL RADIUS

30+
INTERNATIONAL LECTURES

24
PUBLICATION FEATURES

56
NATIONALITIES

50 : 50
FEMALE : MALE



CHALLENGES

WE ADDRESS

Quality Design is considered a luxury.

Spaces and places are often built with no design input or without the correct construction knowledge. This is heightened in marginalised communities, leading to inadequate and poorly built spaces, governed by inadequate design standards.

Design & Construction education is difficult to obtain.

With built environment education being expensive and highly oversubscribed, many wanting to pursue careers in the subject are restricted. This is emphasised in remote and marginalised communities.

Gender prejudice in the construction industry.

Construction is notoriously a male dominated industry. The issue is further emphasised in developing countries where there are often more ‘prescribed’ gender roles in society.

Inefficiencies within the design & construction procurement process.

Multiple parties within a procurement team means that projects take longer to complete, cost more to build and present more risk to the client.

Construction industry is a huge contributor to the environment.

Construction contributes a huge amount to global carbon emissions. Often, ‘environmental strategies’ are implemented as add ons to buildings, rather than being a consideration from the start.

Construction industry is largely driven by profit.

The majority of developers and contractors operate on goals centered solely around profit, with few seeing value in balancing profit with purpose or impact.

OUR RESPONSE

THE VISION

DEMOCRATIC EDUCATION, QUALITY DESIGN, ACCESSIBLE FOR ALL.

Every human being should have the opportunity and tools to shape the spaces they inhabit.

We should all benefit from the quality of life that is achieved through informed design.

Construction has to reduce its environmental impact on our planet.

We are dedicated to creating skill exchange opportunities through design and construction. We enable this process through 3 key strategies:

Design Through Collaboration

By working with communities, NGOs, corporate clients, international participants and skilled professionals, we deliver projects from conception through to handover. Collaboration is crucial to the success of our projects, with every stakeholder contributing and benefiting equally.

Learn Through Building

We encourage students, local workers and young practitioners to be active co-creators in a vibrant learning community. Through the process of on-site construction we facilitate an exchange of knowledge which creates innovative design and build solutions.

Experience Through Immersion

By living, working and building with the communities that we partner with, we establish lifelong relationships and cultural exchanges. This shared experience builds trust which enables us to gain valuable end user engagement.

OUR RESPONSE

THE SOLUTION

Whilst the majority of developers and contractors operate on goals centered solely around profit, without consideration for balancing profit with purpose or impact, we do things a little differently.

We seek the active engagement of several key stakeholders all bringing their value to a project. This allows us to create the most impact possible through any brief brought to us.

Our community development projects establish these key stakeholders to ensure that the projects run smoothly from initial brief making through to completion. Each stakeholder has their own set of responsibilities and contribute their skills and knowledge to the project.

All stakeholders individually benefit from a collaborative, inclusive process that meets their personal needs. We hope that on a larger scale this structure can act as a precedent for a change in the status quo regarding access to quality employment, quality design and design education.

The Community

For a project to be successful the community and end users must be fully supportive and engaged in the design and construction process. Since the building will be maintained and occupied by them, their input throughout the project duration is critical in creating a building that works best for their needs.

NGO / Local Partner

It is crucial for us to partner with either a local figurehead or NGO / Charity who has both the knowledge and trust of the local community. Their responsibility is to identify where there is a need for a project, communicate with the community in the lead up to the project as well as fundraising the cost of materials and labour.

Sponsors + Donors

The sponsors and donors of each project either provide direct financial support or input their work pro-bono, such as the engineers and any relevant specialist design consultants. Additionally, material suppliers or manufacturers may donate their product to be used within the project at a reduced rate or free of charge.

CAUKIN Studio

CAUKIN Studio is responsible for the overall design process and construction management. We work with each stakeholder to formulate a design that satisfies the needs of the community and tackles any challenges set out in the initial brief. We assemble and manage the team of international participants and the local workforce.

International Participants

In many of the projects we undertake, we invite architecture, design and engineering students / young professionals to be involved in the design and build process. They're able to input with their design education as well as learn about working within a different climate and context and gain on-site construction skills.

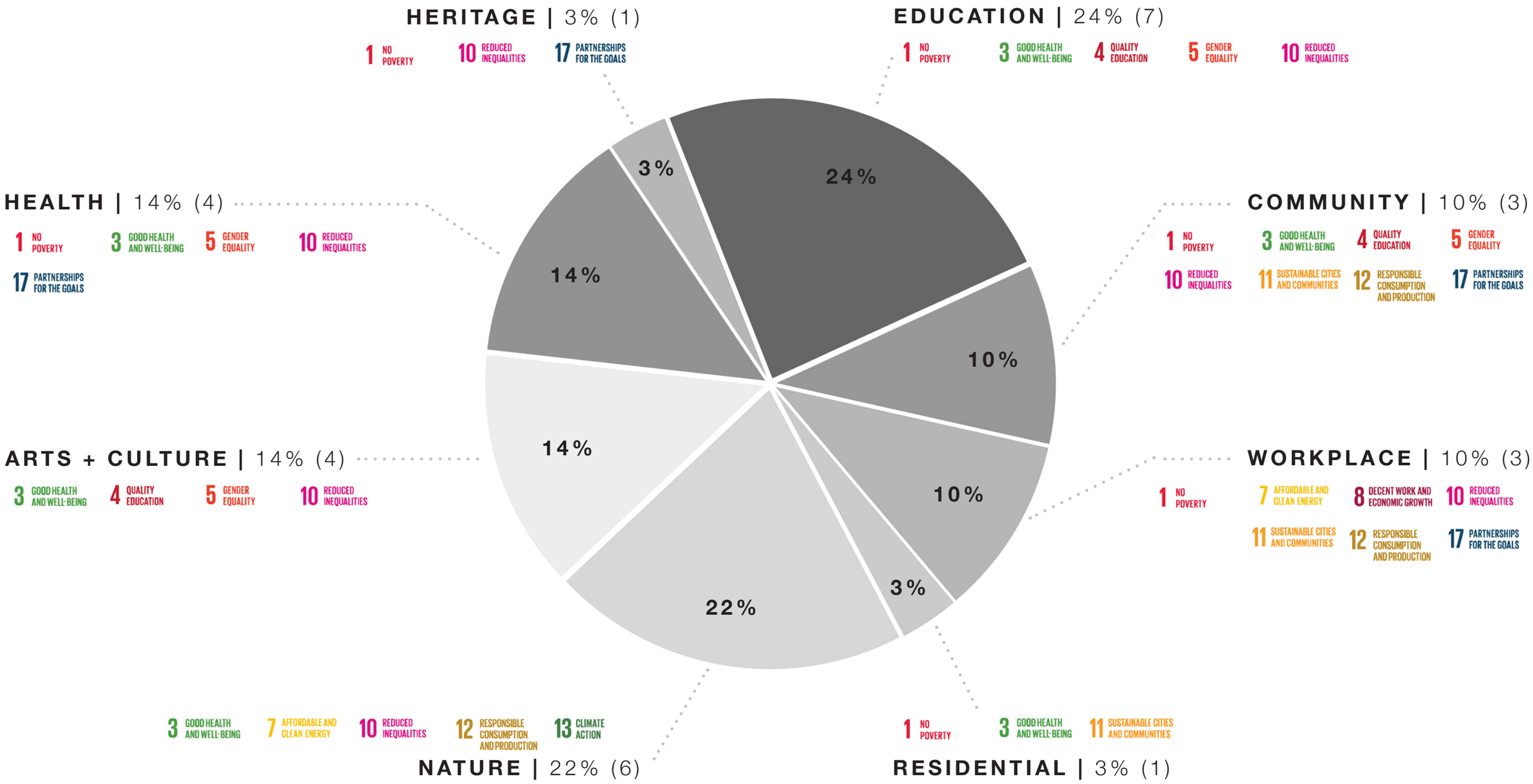
Local Skilled Workforce

When it comes to building, the local skilled workforce know a great deal about what is available and the correct ways of using it. We combine this knowledge with that of our engineers and our design expertise to generate a high quality design whilst using the skills and materials that are accessible to them.

OUR COMMITMENT

PROJECTS TO DATE

This project breakdown shows our commitment to creating an impact across all areas of construction typology. Each segment represents our completed projects, split by sector alongside their corresponding SDG impact achievements.



IMPACT AREAS

OUR KEY FOCUS POINTS

DEMOCRATIC EDUCATION

Job Creation + Skills Training

Education is recognised globally as a tool that enables upward socioeconomic mobility and is a key to escaping poverty.

Opportunities to learn in both the classroom and in practical situations can be incredibly difficult to obtain for remote communities. Design thinking, **problem solving, planning are highly transferable skills which can be taught through design and build education. These skills have the potential to spark socioeconomic mobility in communities of scarce resource and high necessity.**

Through our democratic approach to education within design and construction, we facilitate a natural exchange of knowledge and skill, which is incredibly valuable to remote communities and international participants alike.

This melting pot of ideas, from across the world and across generations, through a practical application allows all members of the team, from donors to professionals, locals and participants, to take an active role in their self-education.

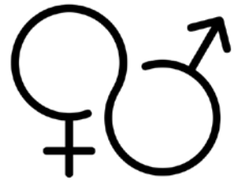
QUALITY DESIGN

Longevity, Inspiring + Low Impact

Quality design, in the context of built projects is **a carefully considered, well crafted process, taking into account the different facets of it's brief through innovative ideas, grounded in expert knowledge.** Considering it's spatial quality, cost, environmental impact, aesthetic quality, social impact and functionality (amongst many others!), all in equal measure.

Additional value is brought to the design with the expertise of structural engineers, global climate and design specialists as well as subject specific experts (e.g. bee keeping). **This provides longevity of structure and safety against climate / weather whilst routed in the rich knowledge of the community.**

Quality design is not only mindful of its carbon footprint in construction but also its impact on the earth throughout its lifespan. Innovative use of local materials and vernacular construction techniques that **create something inspiring and enjoyable to experience is vital to the quality of the project. Through a quality design process we can bring people together in a positive manner reducing loneliness and increasing positive social interaction.**



ACCESSIBLE FOR ALL

Career Exploration Without Barriers

Globally, the number of people living in extreme poverty declined from 36% in 1990 to 10% in 2015. But the pace of change is decelerating. Those **still live in extreme poverty today, are struggling to fulfill the most basic needs** like health, education, and access to water and sanitation, to name a few. **Worldwide, the poverty rate in rural areas is 3 times higher than in urban areas.**

In many instances, **having a job does not guarantee a decent living;** 8% of employed workers worldwide lived in extreme poverty in 2018. **One out of five children live in extreme poverty. Ensuring social protection for all children and other vulnerable groups is critical to reduce poverty.**

Our collaborative construction projects, **seek to provide opportunities for EVERYONE, not just those assumed in these roles**. We aim to further personal development and potential employment skills by learning together. Where possible we encourage economic independence through a project's brief and final outcome. **We know the communities we collaborate with have the power and drive to do this themselves, they just need opportunity and platform to do so.**

DEMOCRATIC EDUCATION

DEMOCRATIC EDUCATION

THE RELATED GLOBAL FACTS

1:8

WOMEN TO MEN IN THE UK CONSTRUCTION INDUSTRY[12]

This number represents one of the best situations globally, with other countries and continents much further behind.[13]

7.6%

UNEMPLOYMENT - LEAST DEVELOPED COUNTRIES[6]

Around 9.4%[7] of people between 15-24 and 6.43%[8] of all women are currently unemployed in the least developed countries.[7] With the international average being around 5%[9]

260,000,000

CHILDREN + ADOLESCENTS ARE OUT OF SCHOOL[18]

IN 2019 this huge number of children and youth were out of school with millions of those children who rely on school meals needing to look to other sources for daily nutrition. Children being out of school is disrupting learning and upending lives, especially the most vulnerable and marginalised.

DEMOCRATIC EDUCATION

OUR IMPACT

6000

END USERS

Reaching out to communities across the world, in some of the most remote locations.
Over 6000 people across 33 communities have been reached through our design and construction projects worldwide.

12

PARTNER CHARITIES/NGOs

Partnering with a diverse group of international charities and NGOs is incredibly important.
Delivering on a huge range of charitable objectives and wider impact areas through open collaboration with these groups allows us to reach more people across all demographics.

42

UNIVERSITIES

Having the active engagement and backing of internationally recognised institutions.
Receiving students from over 60 universities and 4 continents, has a natural trickle down effect of education to further students at those universities and workplaces.

65

16-21yr LOCALS BUILDING

Throughout these design and build projects a conscious effort is always being made to engage the youth of the community.
Giving those younger members the chance to try new career paths, regardless of assumed gender roles.

30+

INTERNATIONAL LECTURES

Lecturing internationally to 30+ different cohorts of students, professionals and public groups.
Allowing us to spread the importance of our message and educate others on our mission and solution. This opens a public discussion around humanitarian architecture and increases learning.

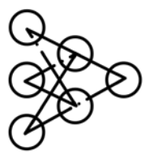
119,080

HOURS TAUGHT

On-site and construction related education for all stakeholders within a project, through the act of collaborative design and building.
The number of participants and locals educated over our projects equates to roughly 30 undergraduate degrees.

But don't just listen to us, take it from them!
These statistics are taken from our first-hand survey of collaborators from our 2019 projects.

ON SITE KNOWLEDGE EXCHANGE



91%

Thought there was a regular and successful knowledge exchange.

EDUCATION OF ON-SITE SAFETY

88%

Thought project site safety and teaching was above average.

ON SITE ATMOSPHERE

98%

Said the learning environment on site was good - outstanding.

DEMOCRATIC EDUCATION

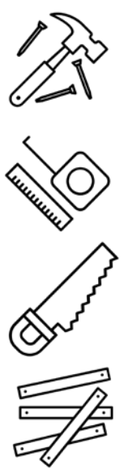
CASE STUDY

01

JOEY

INPUT:
- Local knowledge + suppliers
- Trade skills (carpentry)
- Time to learn
- Facilitate local - participant exchange

OUTPUT:
- Low-risk testing for business idea
- New future income stream
- Economic independence
- New business skills / experience
- Further construction + design skills



INPUT:
- Platform to work
- Design thinking
- Teaching time

OUTPUT:
- Far higher build quality
- Local ownership
- Safety in design delivered

02

CAUKIN

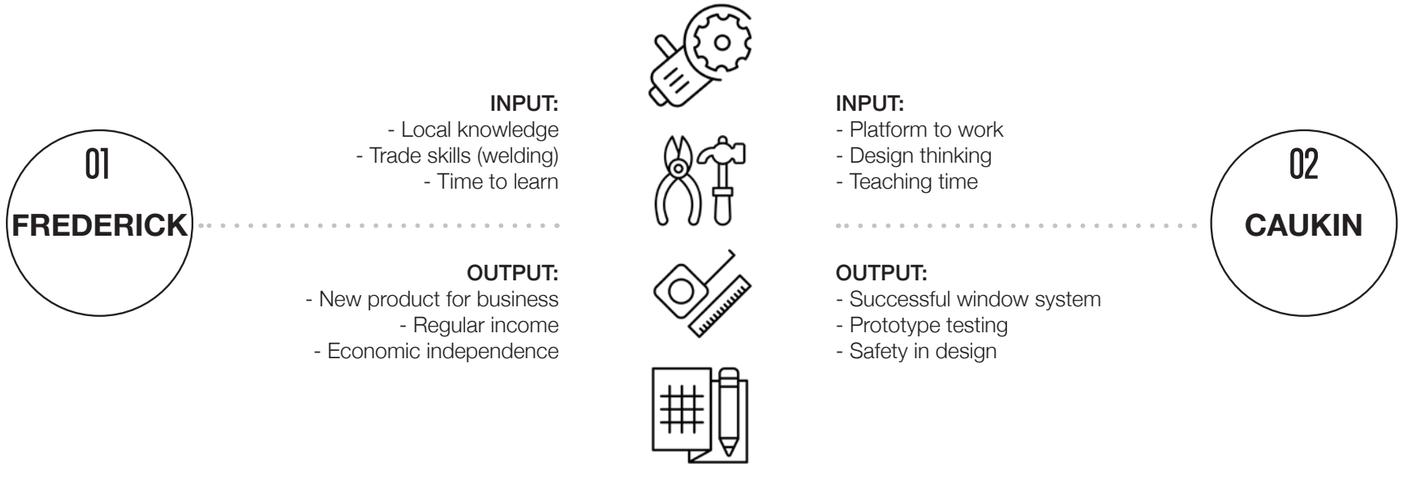
CASE STUDY: JOEY'S LOCAL INITIATIVE

Joey, a local resident of Vivili village played a vital role in the construction of the new community hall in 2017. Along with several others, on our other early builds, Joey unknowingly taught us of a 6th important project stakeholder category - the skilled local workers.

As part of his commitment towards the project, Joey helped out on-site every day for the two month build, contributing his tacit knowledge of local materials and vernacular Pacific construction. Through the ongoing collaboration with the engaged group of international participants, hybrid design solutions and new construction techniques were introduced to his pre-existing building knowledge. As a result, after construction was completed, Joey started his own building company with some of the other local community members. As well as some basic training for the other workers, Joey offers his newly-improved skills in construction, on projects in the surrounding villages. Being able to offer slightly different styles and techniques, based on a successful and tested structural strategy has set Joey's business apart from the rest.

DEMOCRATIC EDUCATION

CASE STUDY



CASE STUDY: FREDERICK'S WINDOWS

Frederick, a core team member on the Mothers of Africa Evergreen School build, was one of our brilliant skilled workers. Fred's job, whilst welding all the steel on the entire building, also involved teaching others his trade. Fred worked alongside two welding apprentices, who had shown a keen interest in bettering their skills and therefore employability in the future. Along with his two welding apprentices, Fred manufactured 17 trusses, 15 windows and 9 doors! He worked closely on the technical design for these elements with the CAUKIN Team and local suppliers.

Following the completion of the project, alongside his new apprentices, Fred has taken his pre-existing welding skills and the team's joint window design to now manufacture openable window and shade systems like Evergreen's for sale locally! With the input of suppliers, users and future customers, Fred has tactfully adapted the skills and design on the original school to create a product that is local, highly usable, affordable and in high demand within the local community. This brilliant spin off business has been one of many positive trickle down affects caused by the democratic style of design education.

QUALITY DESIGN

QUALITY DESIGN

THE RELATED GLOBAL FACTS

>3,900,000

LEFT HOMELESS EVERY YEAR[1]

Around 60,000[2] people lose their lives every year to natural disasters and there is a direct link between deaths and damage caused and poverty.[3] The impact on low SDI countries being far greater.

800%

INCREASE IN NATURAL DISASTERS SINCE 1960[16]

The increase in carbon emissions and greenhouse gases correlates with the number of natural disasters per year. With the world's poorest being the most vulnerable to climate change impacts.

1,000,000,000

PEOPLE LIVE IN SLUMS WORLDWIDE[15]

Rapid urbanization is resulting in a growing number of slum dwellers, inadequate and overburdened infrastructure and services, worsening air pollution and unplanned urban sprawl.

QUALITY DESIGN

OUR IMPACT

50km

MATERIAL RADIUS

For our 7 projects in Fiji, 80% of materials traveled less than 50km from supplier to site (with the remaining 20% within 250km). So if something needs replacing or a replica of the design is required elsewhere, the community can easily access the necessary materials.
This also means less environmental impact and a lower embodied carbon within the build.

<$100

MAINTENANCE PER YEAR

Within the design of every project attention is drawn to ongoing maintenance + running costs. Creating structures for communities that can then not maintain and operate the space negates it as a usable facility. It is incredibly important to use design and climate strategies to reduce the ongoing costs.

27

PUBLICATION FEATURES

Appearing in 22 different media outlets across 7 different countries.
Being able to spread the work that is being done and the importance of our mission to thousands of people. This also increases exposure of quality collaborative and humanitarian architecture in the public discourse.

1300

SQM OF SAFER STRUCTURES

Designing and building safer structures in response to, and in anticipation of natural disasters.
All projects are held to the highest structural and climate-resistant standards possible within the budget. The longevity of the building and safety of the users is central to all design decisions.

100%

UNDAMAGED POST CYCLONE

Increased structural performance of built projects having had a comprehensive structural design and in depth testing.
The strength of CAUKIN builds vs vernacular / existing style as would have been built was clearly and tragically exemplified after cyclone Harold in Vanuatu in 2020. Being one of only three buildings to remain completely intact.

368

EXPERT HOURS

Of pro-bono work from structural engineers, climate + passive design specialists as well as project-specific experts.
Bringing huge amounts of value to a project through the formal professional skill of industry leaders.

But don't just listen to us, take it from them!

These quotes are taken from our first-hand survey of collaborators from our 2019 projects.

NAWENI KINDERGARTEN, FIJI

"I learned a lot from them and I tried to share some of my skills too. When you combine the skills together, it makes a perfect project."

- Samu Vosaniyavu,
Skilled Village Carpenter

RANWAS SCHOOL, VANUATU

"Our new school building, is strong and secure, it is still standing after cyclone Harold. It was 1 of only 3 buildings to survive."

- David Taback,
Ranwas School Teacher

EVERGREEN SCHOOL, ZAMBIA

"The new classrooms that have been built are a real blessing. The children now have much more space to learn properly."

- Nonde Chifunda,
Evergreen Senior Teacher

QUALITY DESIGN

CASE STUDY

KEY DESIGN ELEMENTS:	KEY DESIGN EXPERTS:	VALUE ADDED:
PORTAL FRAME STRUCTURE	STRUCTURAL ENGINEER	EASE OF REPLICATION, INCREASED PRECISION AND STRENGTH AGAINST CYCLONES
NATURAL VENTILATION STRATEGY	PASSIVE DESIGN SPECIALISTS	DECREASE RELATIVE HUMIDITY IN LIBRARY AND PRESERVE BOOKS
LOCAL MATERIAL CLADDING	LOCAL SKILLED WORKERS	UTILISING LOCAL SKILLS, REDUCING BUDGET, EASY AND FREE MAINTENANCE

CASE STUDY: RANWAS SCHOOL + CYCLONE HAROLD

On the 6th April 2020, Vanuatu was hit by a category 5 cyclone, causing widespread destruction. In many areas, including Ranwas Village, the tropical cyclone was the strongest storm in history, destroying crops, vegetation, communication towers, water supplies and 90% of buildings. Just 6 months after completing Ranwas School both the building and the people of the village faced their first major test, and re-emerged after the storm, unscathed.

One of only three buildings remaining un damaged, it will now provide the community space to shelter whilst the reconstruction is underway. This natural disaster highlights just how crucial it is for us to ensure we understand every factor within a project's context.

Through the involvement of a professional engineering firm, dedicating their hours pro-bono to the project, this structure stayed standing. The value given by these construction professionals can not be understated after such an extreme disaster has caused so much destruction. This project, through a terrible natural disaster, is a surviving example of the importance of quality design.

QUALITY DESIGN

CASE STUDY

KEY DESIGN ELEMENTS: | **KEY DESIGN EXPERTS:** | **VALUE ADDED:**

KEY DESIGN ELEMENTS:	KEY DESIGN EXPERTS:	VALUE ADDED:
PAVILION STRUCTURAL STRATEGY	STRUCTURAL ENGINEER	INEXPENSIVE TO MAINTAIN, PUBLIC ABLE TO LEARN ABOUT HIVES THROUGH STRUCTURE
DISCONNECTED LIVE HIVE ATMOSPHERE	BEEKEEPING EXPERT	RIGHT CONDITIONS FOR BEES AND BEEHIVE TO WORK. GOOD DATA COLLECTION AND ANALYSIS
CAREFUL MATERIAL SELECTION	LOCAL MATERIAL SUPPLIERS	RECLAIMED MATERIALS REDUCES BUDGET, STANDARDISED MATERIALS EASY TO WORK WITH

CASE STUDY: HIVE MIND, THE EDEN PROJECT

Working with the Eden Project and B4 Project we built an observation beehive from reclaimed scaffolding poles and sustainably sourced timber. The pavilion acts as a sculptural beacon to draw visitors to view the 25,000 bees that live within. In 2019, Eden became a protected bee reserve for the native dark honey bee, unveiling the new observation hive. The pavilion allows visitors to learn about the importance of these creatures and see how they live. Dr Jo Elworthy said: “Pollinators, including bees, pollinate around a third of our crops and help our wild flowers to survive and thrive, playing a huge role in conserving the biodiversity of our countryside and food supply.”

In the same way as a bee colony acts as a single organism, each structural column is connected and dependent on the others in order for it to stand strong. Separate to the main structure, two timber doors provide darkness for the bees to work. Once opened they reveal a glass screen separating visitors to the live beehive within. The hive is supported in isolation from the rest of the structure, minimising vibration and therefore any potential disturbance from the pavilion. The observation hive itself was designed and built by Christian Brown out of mirrors and acrylic, allowing visitors to see the full workings of the hive from every angle, enhancing their leaning experience.

ACCESSIBLE FOR ALL

ACCESSIBLE FOR ALL

THE RELATED GLOBAL FACTS

10%

INCREASE IN URBAN MIGRATION[10]

Global trends of rural to urban migration is draining skills from rural communities, particularly in low SDI countries, quality jobs and infrastructure are declining. Of this urban population 1 in 3 live in slum settlements.[11]

>750,000,000

LIVING IN EXTREME POVERTY[4]

A direct correlation is found between income, education and life expectancy. There are 9.94% of people living on less than $1.90 per day, in extreme poverty. A further 54.8% in poverty living on less than $10.00 per day.[5]

3x

HIGHER POVERTY RATE IN RURAL SETTINGS[14]

The poverty rate in rural areas is 3 times higher than in urban areas. There is a strong link between basic human needs like access to health + education, sanitation, quality employment and the rural-urban divide.

ACCESSIBLE FOR ALL

OUR IMPACT

120

COLLABORATORS ENGAGED

We have worked with over 120 collaborators, consisting of NGOs, organisations, governments, engineers, environmental designers, funders and educational institutions.

50 : 50

FEMALE : MALE

Having a balanced team composition is vital to our mission and core ethos.
All projects have at least a 50:50 split of men and women on site, with the participant segment being closer to 70:30 female to male workers. This is incredibly important in breaking down gender roles and providing an open and democratic atmosphere on project.

3

NEW BUSINESS STARTUPS

On all projects we require a social, environmental and/or economic issue to be addressed.
Throughout projects and after completion, several community members have gained the skills experience to begin businesses in construction, product manufacture or other areas. Providing their families economic independence and increased income.

9

COUNTRIES

Recognising need and opportunities for large scale impact is something we work closely with our partner NGOs on.
To date projects have been completed in Cambodia, Indonesia, Fiji, Vanuatu, Zambia, Sierra Leone, India, England and Wales. With further commitments to 5 other countries in place.

13 : 4

RURAL : URBAN PROJECTS

Rural communities are being negatively impacted by natural and human crises to a far greater extent.
With our partner NGOs, our project selection system consciously engages with as many remote rural communities as possible, creating meaningful connections, quality employment and delivering vital facilities. We have commitments to a further 6 already in place.

56

NATIONALITIES

Participants from 56 different countries have attended our projects. Being able to come together to share their experiences and cultures.
The spread of nations and experiences increases the open atmosphere on site allowing all to have their opinions and ideas heard.

But don't just listen to us, take it from them!

These quotes are from some of our valued collaborators across all different projects.

EVERGREEN SCHOOL, ZAMBIA

"We have learned a lot from this, how to dig foundations, set lines, lay bricks. We want to thank the company as it has given us a job and a way to earn an income whilst learning."

- Monica, Sara, Rachel, Martha, Bertha + Margret,
Evergreen Construction Team

RANWAS SCHOOL, VANUATU

"We want the children to take part, seeing what sort of things you're doing, and absorb it. Children learn differently, some are book learners, but some need to see things with their own eyes."

- Eunice Bebe,
Ranwas School Teacher

SAVUDRODRO HALL, FIJI

"It's a good sight to see more women interested in carpentry work, and also very surprising for anyone that passes, to see women coming from overseas to make this kind of work."

- Iva Batiki,
Village Chief

ACCESSIBLE FOR ALL

CASE STUDY

"**Women are massively under-represented in the construction industry.** In Zambia and across much of the world, women are not normally considered for a job in construction. We feel it integral to our beliefs, that Female members of our team are employed throughout our ranks, from leadership to participants and local employees.

The women that made up our local team set an important precedent in the community- that women are able to do anything they want to. Each one of our local team set an example empowering the women around them, Their attitudes to hard work, enthusiasm to learn new skills and ability to do their job as well, if not better than the males on site, made them in-despensible.

Not only did the women work immensely hard, they also provided a fun dynamic sharing their stories and getting everyone involved in a good sing and dance on site.

Having spent over 3 months with them, I was proud of what they had achieved. I loved that they felt empowered to do whatever they want to do with their lives, whether it be in the construction industry or not. **Margret was saving some of her wages each day to become a brick mason and get her brick-laying qualification, Rachel was looking at going back to school to train as a psychological therapist, and Bertha wanted another job on a construction site.**

During my time in Zambia it was touching to hear words from many of the students and teachers. A speech that the headmaster Mr Phiri gave at the completion of the classrooms stuck in my head particularly **"When they started building I couldn't identify the boss because their was no man, but look, these new classrooms were built by men and women. If you work hard in school you can do any job you want."**

- Samantha Litherland, Project Leader

CASE STUDY: THE WOMEN OF CHONGWE

Women currently make up 14% of the construction profession in the UK, a number which is considerably lower in the majority of the rest of world. The industry has always been very heavily male dominated, especially on site. Although these misconceptions about gender specific roles are beginning to diminish, we certainly feel that we can do much more as an industry to encourage women to pursue site management, construction management and on-site roles. We take an active role in this by employing and training local women on our sites, whilst bringing around 70% female participants to act as great ambassadors and examples to younger girls in the community.

In 2019, alongside our partner Mothers of Africa at the Evergreen School project, over 30 local workers were employed for the duration of the build. Of these 30, over 50% of the core team were female. With unemployment rates in Zambia being so high, it was important that this project also became a vehicle to teach workers new skills increasing their opportunity for future employment.

ACCESSIBLE FOR ALL

CASE STUDY

"**Its really amazing to have participants here from other countries, that way we can all learn from each other.** Although as a society here, we see the men as the head of the household here in Fiji, we know it is because of the women that everything comes together. Having more women doing 'men's work' now is a good thing because I think women have a different way of thinking in designing and in many other things. **It's really a learning experience too for the children of this village, especially the girls, maybe in the future they may decide to work in the engineering industry.**

Since we opened the hall, a year ago, the chief of our district has decided that the first district [council] meeting should be held here - this is very good news for the village. **Every village should have a hall; a hall brings together the members of the village together.**

- Vosa Baravilala, Turaga ni Koro (village headman)

CASE STUDY: FROM HALL TO MULTI-USE

Originally the Naidi Community Hall had a project brief to provide a communal space for the village to gather and enjoy each others company as well as providing the very active women's group with a place to gather, host discussions and work on their hand-made crafts. In the past, the women have sold their crafts individually outside their homes, but now that the new hall provides a dedicated space for these occasions the sales have increased significantly, providing a sustainable income for the families.

Since it's completion in 2019, the space has also been utilised for other further functions, bringing interest, education and some financial return for the village. The hall is now regularly used as a village kindergarten 2 days per week, for ceremonial functions, musical performances, youth group meetings, informal gatherings and even District Council meetings. Due to it's success as a kindergarten, the government has also recently sent a village member to formally train to become a fully qualified teacher, allowing the new school to operate 5 days per week. The flexibility of the space and ingenuity of the community has made this project truly a space for all.

DELIVERING

OUR TARGETS

DEMOCRATIC EDUCATION

Job Creation + Skills Training

Target One:
Local leadership teams implementing full scale projects within the community.

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Target Two:
Engaging and setting up partnerships with universities on every continent.

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Target Three:
Wholesale build replication beyond just the details.

QUALITY DESIGN

Longevity, Inspiring + Low Impact

Target One:
A higher % of local worker teams to reduce the overall carbon footprint for each project.

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Target Two:
Further research to educate on climatic issues, including: local cladding options, structural materials and techniques.

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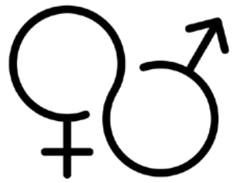
Target Three:
Further material locality (identification and supplier partnerships).



ACCESSIBLE FOR ALL

Career Exploration Without Barriers

Target One:
Increased formal skills mentoring on site with equal opportunities for male and female workers, producing accredited qualifications.

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Target Two:
Engaging with disable and extra needs demographics on suitable projects.

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Target Three:
Increased local autonomous business and incurred mentoring.

DELIVERING

A LOOK AT NEXT YEAR

DEMOCRATIC EDUCATION

EDUCATE 50 GIRLS + BOYS BETWEEN 16 - 25

QUALITY DESIGN

REDUCE CO_2 FOOTPRINT PER PROJECT BY HALF

ACCESSIBLE FOR ALL

ENGAGE 300+ PEOPLE FROM 20 DIFFERENT COUNTRIES

REFERENCES

THE UN'S SUSTAINABLE DEVELOPMENT GOALS

Whilst putting together this document we are able to reflect on our sustainability activity in relation to the United Nations Sustainable Development Goals (UN SDGs). They are the world's collective call to action to end poverty and restore our planet's life support systems by 2030. We have recognised six of the goals are closest to our business impact, in addition to these we also indirectly address 2 others and are working towards the remainder!

DIRECTLY ADDRESSED

SDG 04: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

To do this we are committed to:
- building schools / educational buildings
- on-site vocational education in construction skills
- informal design education
- supplementary education to traditional subjects + courses

SDG 05: Achieve gender equality and empower all women and girls

To do this we are committed to:
- inclusion measures and policies
- 50% female-to-male participatory
- 50% female local leaders / workforce

SDG 10: Reduce inequality within and among countries

To do this we are committed to:
- working specifically in rural areas
- working with developing countries
- working to include sustainable income as part of a project where possible

SDG 11: Make cities and human settlements inclusive, safe, resilient and sustainable

To do this we are looking to commit to:
- Argentina project
- Brazil project
- Fiji, Indo + Philippines housing / community prototypes

SDG 12: Ensure sustainable consumption and production patterns

To do this we are committed to:
- promoting resource and energy efficiency, sustainable infrastructure, and providing access to basic services
- green and decent jobs and a better quality of life for all.
- reduce future economic, environmental and social costs, strengthen economic competitiveness and reduce poverty.

SDG 17: Strengthen the means of implementation and revitalize the global partnership for sustainable development

To do this we are committed to:
- "creating partnerships on global, regional, national and local levels."
- "these inclusive partnerships built upon principles and values, a shared vision, and shared goals that place people and the planet at the centre."
- "partnerships between governments, the private sector and civil society"

INDIRECTLY ADDRESSED

SDG 01: End poverty in all its forms everywhere

To do this we are committed to:
- by working in remote and often impoverished locations on communal projects for all, with an eye to sustainable maintenance and, where applicable, economic elements to give independence.
- working on wider reaching systematic projects like building back better, more resilient affordable housing

SDG 03: Ensure healthy lives and promote wellbeing for all at all ages

To do this we are committed to:
- actively promoting well-being and good practice of work within the company through our company handbook
- acting as an exemplar of good and acceptable levels of well being when on project, explanation of well being ideas to local community
- through careful end-user understanding and thorough research / workshops, designing beyond best practice and dimensions to create inspiring and uplifting spaces.

REFERENCES

THE UN'S SUSTAINABLE DEVELOPMENT GOALS

WORKING TOWARDS

SDG 06: Ensure availability and sustainable management of water and sanitation for all

To do this we are looking to commit to:
- only engage in projects that include a sufficient clean and fresh water source or collection method (rainwater catchment, ground source pump etc.) Otherwise insisting and designing in these elements of the project.

SDG 07: Ensure access to affordable, reliable, sustainable and modern energy for all

To do this we are looking to commit to:
- only engage in projects that solely use / rely on renewable energy.
- cooking element to all suitable projects (domestic based).
- partner with UV, renewable energy, solar light, cooking element etc providers.
- pledge of commitment to end-use applications in buildings

SDG 08: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

To do this we are looking to commit to:
- work towards local partnerships, mentor businesses + entrepreneurs.
- explore possible local spin-off business routes in relation to projects.
- incorporate sustainable economic functions to schemes where suitable.
- taking on working partnerships with agricultural bodies (e.g. TECA, in Fiji)

SDG 13: Take urgent action to combat climate change and its impacts

To do this we are looking to commit to:
- Argentina project
- Brazil project
- Fiji, Indo + Philippines housing / community prototypes
- Include baseline number for footprint of buildings we produce (inclusive of all travel etc.)

01: https://ourworldindata.org/grapher/number-homeless-from-natural-disasters?time=1998..2019
The recorded value for the average number of people left homeless worldwide, per year, over the past 20 years. Data collected between 1998-2018.

02: https://ourworldindata.org/grapher/natural-disaster-death-rates?time=1998..2018
The number of recorded deaths globally, over the past 10-20 years, caused as a result of natural disasters.

03: https://ourworldindata.org/natural-disasters#natural-disasters-kill-on-average-60-000-people-per-year-and-are-responsible-for-0-1-of-global-deaths
The number of recorded deaths globally, over the past 10-20 years, caused as a result of natural disasters.

04: https://ourworldindata.org/extreme-poverty#all-charts-preview
Explanation of Extreme Poverty and the International Poverty Line.

05: https://ourworldindata.org/grapher/distribution-of-population-poverty-thresholds?stackMode=relative
Distribution of population between different poverty thresholds, globally, recorded between 1981 to 2015. Poverty thresholds are all in 'international dollars' at constant 2011 PPP prices. This means all figures account for cross-country differences in price levels, as well as for inflation.

06: https://data.worldbank.org/indicator/SL.UEM.TOTL.NE.ZS?locations=XL
Total unemployment data for least developed countries (UN classified), with data available (41/46)

07: https://data.worldbank.org/indicator/SL.UEM.1524.ZS?locations=XL&name_desc=false
Youth unemployment data for least developed countries (UN classified), with data available

08: https://ourworldindata.org/grapher/unemployment-rate-women?tab=chart&country=World%3A%20Low%20income
Female unemployment data for least developed countries (UN classified), with data available

09: https://data.worldbank.org/indicator/SL.UEM.TOTL.ZS?end=2019&start=1991&view=chart
International average unemployment

10: https://ourworldindata.org/urbanization#number-of-people-living-in-urban-areas
Amount of people, internationally, living in urban population from 1997-2017. 1997 = 45%, 2006 = 50%, 2017 = 55%

11: https://ourworldindata.org/urbanization#urban-slum-populations
1 in 3 living in slum settlements in urban areas

12: https://www.gmb.org.uk/news/construction-industry-just-125-women-and-54-bame
1 in 8 construction workers are female in the UK.

13: https://www.statista.com/statistics/690097/regional-breakdown-of-women-in-construction-industry/
The percentage of female employment in the construction industry across different continents; Asia (32%), North America (25%), Western Europe (17%), Latin America (13%), Africa (13%)

14: https://www.un.org/sustainabledevelopment/poverty/
Poverty statistics for different demographics

15: https://www.un.org/sustainabledevelopment/cities/
Rapid urbanisation and people living in slums

16: https://ourworldindata.org/grapher/number-of-natural-disaster-events?time=1960..2019
The number of natural disasters between 1960-2019 has gone up from 40 to 361 per year.

17: https://ourworldindata.org/co2-and-other-greenhouse-gas-emissions#global-inequalities-in-co2-emissions
Poorest countries, most vulnerable

18: https://www.un.org/sustainabledevelopment/education/
Education rates of children

THANK YOU!