# How to foster innovation within a social organisation

**Red Social Innovation**
by french + spanish red-cross

Stanford SOCIAL INNOVATION Review

# How to foster innovation within a social organisation

Inspirations, models & methodologies developed throughout
the International Red Cross & Red Crescent Movement

by Red Social Innovation | red-social-innovation.com

Red Social Innovation is an international resource centre for social innovation founded by the French Red Cross and the Spanish Red Cross, and supported by the International Federation of Red Cross and Red Crescent (IFRC), the Solferino Academy, the International Committee of the Red Cross (ICRC), the United Nations Sustainable Development Solutions Network (SDSN), Ashoka and the Stanford Social Innovation Review. Its goal is to test, scale and highlight social innovations created and developed within the International Red Cross and Red Crescent Movement, and by other private or public actors.

Paris - Madrid, February 2022

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# How can an association support innovation ?

Social innovations are entrepreneurial and technological practices that aim to meet social needs and vulnerabilities in a better way than existing solutions. By imagining new socio-economic models, putting technology at the service of social good and transforming the way we work together, innovation can help us adapt and move towards a more sustainable, inclusive and resilient society. On the frontline of crisis response and emerging social vulnerabilities, the International Red Cross Red Crescent Movement has always been at the leading edge of social innovation. From the creation of national relief societies to the neutral role of health care workers in conflict zones and the development of the International Humanitarian Law (IHL) through the Geneva Conventions, the International Red Cross Red Crescent Movement has constantly explored new ways of fulfilling its mission.

But innovation is not a mantra. And social organisations should not innovate for the sake of it. For social organisations, innovation is about improving and challenging current practices in order to better serve the people we are all working for. Initiated by the French Red Cross and the Spanish Red Cross, Red Social Innovation is an international network that promotes social innovations developed within and beyond the International Red Cross Red Crescent Movement with the objective of fostering the exchange of good practices between different countries and National Societies.

This publication highlights a variety of projects featured on Red Social Innovation, representing a collaborative approach in response to the world's most pressing issues. Divided into four categories — Working together, Socio-economic models, Tech as tool and Impact Partners —, this selection reveals different models of innovation which have been identified across the Movement.

In this publication, you will discover the countless ways in which innovation can be implemented: the creation of a FabLab ecosystem in rural Kenya by the Kenya Red Cross Society, the development of social businesses in Eastern Europe by the Austrian Red Cross, or the creation of an hospital by the Japanese Red Cross conceived as an innovation hub open to partnership with private groups and academic institutions.

These models represent different points of entry into innovation which can guide us in the social and humanitarian sector and inspire us for the future.

This publication is also a call to every member of the Movement — senior leaders, volunteers and employees — to continue challenging the status quo and constantly test new ideas in the complex and diverse environments we work in.

Explore and join red-social-innovation.com!

# 1

# Social intrapreneurship

Learn from workers in the field
and support local innovation

As explained by the entrepreneurs Gifford and
Elizabeth Pinchot, "bringing entrepreneurial culture
into the company is the next step in solving
the problems of large-scale organisations"[1].
In order to support the volunteers
and the employees on the field and to promote
a bottom-up approach within the organisation,
intrapreneurship is a strong lever for innovation.
In March 2019, the French Red Cross launched 21,
the Social Innovation Accelerator.
Inspired by the same methodologies,
the Ecuador Red Cross developed a combination
of tools that stimulate intrapreneurial dynamics.

1  Intra-corporate entrepreneurship, Robert Schwartz's School for Entrepreneurs, 1978.

## 1.1

# Intrapreneurship Programme at 21, the Social Innovation Accelerator

French Red Cross

21 is a 1,000m² space located on the first floor of the French Red Cross headquarters in Montrouge, Paris. 21 is composed of a coworking space as well as a digital studio and is dedicated to supporting projects with social impact.
21 has developed a support programme for "intrapreneurs", i.e. volunteers, employees and students of the French Red Cross network who wish to develop a socially innovative project within the Association. The objective of the program is to support and promote ideas from the field – from the ideation phase to the creation of a new product or service, the Intrapreneurship Programme helps volunteers embrace a new professional journey. This approach also transforms the nature of volunteering – creating more committed and proactive opportunities. By reversing the top-down approach to innovation typical of pyramidal structures, the French Red Cross relies on the knowledge, skills and creativity of its 60,000 volunteers and 18,000 employees who have a firsthand perspective of current social needs. The French Red Cross seeks to capitalise on the emerging ideas coming from its local chapters, retirement homes, homeless support, or first aid actions, in order to meet the social needs

of today and tomorrow. The Intrapreneurship programme enables employees and volunteers to design, prototype and test their project with people supported by the French Red Cross and its stakeholders.

**Selection phase** | Each programme season lasts 6 months during which 4 projects are supported. French Red Cross members have between 2 and 4 months to respond to an internal call for projects to join the programme. Once the applications have been received, the team of 21 presents the most promising ideas to the various business departments of the French Red Cross. After its presentation by the project team, each project is examined by two juries. After a day of deliberation, the Selection Committee announces the four laureates for the new season.

**Conception phase** (8 weeks) | The objective of the conception is to ensure that each laureate acquires maximum knowledge of its target and its ecosystem in order to develop the best possible value proposition. To do this, each team must follow the following four training courses: from idea to project, introduction to measuring social impact, search for partnerships & funding, communication around the project. The intrapreneurs have at their disposal a pool of more than 50 experts who can be called upon for individual work sessions. An internal mentor is assigned to each laureate. He ensures that each stage of the coaching process runs smoothly and he guides the intrapreneur in his or her relationship with the French Red Cross and to support him or her in the overall consolidation of the project. This involves identifying the key people for the project within the French Red Cross, bringing the project to the association's decision-makers and passing on its expertise and experience in the field. At the end of the conception phase, each laureate must define his or her value proposition in relation to the needs of the beneficiaries, and build a solid team ready to commit to experimenting with the project.

**Prototyping phase** (8 weeks) | This phase starts with the creation of a prototype of the solution, i.e. an incomplete and non-definitive example of what the final product or service could be. The aim is to improve the process in an iterative logic: the prototype is tested in the field and, after identifying the weak and strong points, it is improved. A new phase of tests is started and so on. Countig on their own and mentor's network, the intrapreneurs identify the French Red Cross facilities wishing to experiment their concept. The multiplication of trials makes it possible to specify the form of the final product/service, to estimate the costs and therefore the amount of funding to be obtained. This stage is therefore an opportunity to lay the foundations of the economic model.

**Deployment phase** (8 weeks) |A Validation Committee assesses the relevance of the deployment of the final projects within the Association. It is composed of the following members of the French Red Cross: the Secretary General, the relevant business departments, the Chief of Innovation and other representatives of the Association's and 21's board.

During the meeting of the Committee, the Intrapreneur manager of 21 presents the results of the experimentation with : a review of the achievements of the 6 months; a review of the feedback of the actors and public supported by the French Red Cross who were able to test the solution; an assessment of the social impact of the project; the conditions of deployment (economic model, human resources, governance). The Validation Committee establishes whether labelling the project by 21 and the French Red Cross, and if deploying the project on a larger scale.

# BOOTCRE, accelerating humanitarian innovation

## Ecuador Red Cross

BOOTCRE is a space for humanitarian innovation bootcamps or hackathons dedicated to the acceleration of innovative, viable, low-cost, high-impact, easily replicable and scalable projects. Each solution passes through a mentoring and development stage with experts from the Ecuadorian Red Cross as well as other organisations. These acceleration events last between one and three consecutive days of work.

The Ecuadorian Red Cross channels its humanitarian action through projects aimed at responding to different social challenges. In the past few years, however, the majority of institutional projects have directed their focus to emergencies, leaving prevention and development projects aside. Furthermore, the vast majority of projects that are implemented in each community are developed by technicians, where the contribution and experience of both the volunteers and the communities are not taken into account.

As part of the implementation of the Training and Innovation System (SIFI), the Ecuadorian Red Cross has put together a national bootcamp as a starting point for its innovation process. Although the event was unable to take place as planned due to the COVID-19 pandemic, the team was able to rethink and adapt BOOTCRE to be carried out virtually. Following the event, all teams are offered the opportunity to carry on with their projects in Meraki, the Ecuadorian Red Cross coworking space. Additionally, the Ecuadorian Red Cross is building a Meraki mobile application that offers volunteers remote guidance in the conception and development of their solutions.

BOOTCRE seeks to trigger systematic change within each community as well as the National Society by means of reflection, conversation and action. The primary objective is to provide tools and methodologies to those who strive for social change, thus enhancing their ability to positively impact lives. It is designed for anyone who has an idea and wants to pursue it, regardless of age, experience or professional profile. BOOTCRE aspires to encourage the conception of innovative ideas to solve specific problems, fulfilling the role of incubator and accelerator of projects.

# Social entrepreneurship

Collaborate with social start ups

Following the definition of the OECD,
social entrepreneurship targets to social impact
primarily rather than profit maximisation
in their effort to reach the most vulnerable groups
and to contribute to inclusive and sustainable growth.
In other words, social entrepreneurship plays
the difficult exercise to find a balance between social
impact and economic performance.
If in the past years, traditional charities and NGOs
have been skeptical and even adverse towards
this model, they recently found an opportunity
to integrate and adapt it to their needs
and organisation.

# Entrepreneurship Programme at 21, the Social Innovation Accelerator

French Red Cross

In 2019, the French Red Cross built entrepreneurial support programs promoting the collaboration with external stakeholders (NGOs, social enterprises, private companies, etc.) and the creation of joint social innovation projects that fit the needs and strategy of the organisation.

Similar to the Intrapreneurship track, this entrepreneurial program supports the adaptation of existing external solutions to the needs of the French Red Cross. Once the validation committee has approved the solution after the six months of acceleration, several options are available in order to deploy the solution at a larger scale:

1. **Commercial advantage**. The French Red Cross has the right to use the services and products, at cost price, developed by the project leaders within 21.

Ex. *The startup Arbitryum, which offers a measurement tool to improve the quality of life in retirement homes, offers to the French Red Cross more advantageous rates and a customised solution.*

2. **Partnership**. The French Red Cross continues to spread the solution within its network, helping it to respond to calls for

projects or to raise funds. Ex. *The startup Solinum, which has created a guide listing the services for homeless people, is being used by more and more social workers from the French Red Cross and other charities. The support of the French Red Cross helps Solinum to find new partners in exchange for the free use of the solution.*

3. **Co-construction**. The project leader and the French Red Cross, supported by 21, create a new joint venture.

Ex. *The social startup WERO recruitment agency, which helps refugees find employment, is building with the French Red Cross a training programme in the social and health sector to improve the employability of job seekers.*

2.2

# REDpreneur, developing social business in Eastern Europe and South Caucasus

## Austrian Red Cross

REDpreneur is the first-of-its-kind innovation and acceleration program of the Austrian Red Cross to support the development of business skills and innovative impact driven enterprises in the health and social sector.

By offering a unique immersive learning experience, REDpreneur supports changemakers of the International Red Cross Red Crescent Movement, local Civil Society Organisations and impact driven start-ups in improving their business skills and developing social business models that prioritise transformative social impact while striving for financial sustainability. It enables Red Cross and Red Crescent National Societies to ideate and accelerate services that generate revenue through a mix of funding, thus making them more financially sustainable and stronger in providing other types of humanitarian support needed in their country. REDpreneur was created by the Austrian Red Cross as a result of a yearlong dialogue with specialists to understand its role in the impact investing ecosystem. Business skills and enterprise development facilitation is not only seen as an adequate tool to support the development of Red Cross and Red Crescent Societies in

partner countries, but also adds value to the existing social innovation initiatives of the Red Cross and Red Crescent Movement. In particular, the program offers to those social innovations, with potential for earning income, a pipeline towards impact investing. The program is implemented in partnership with impact enterprise specialists which take over the training in business and financial planning while the technical sectoral expertise comes from the Austrian Red Cross and the International Red Cross Red Crescent Movement. With funding from the Austrian Development Cooperation, REDpreneur is currently being piloted within the area of health and social services and focuses on East and South-East of Europe and the South Caucasus region.

The region was chosen since major drivers of change in the health and social service sectors can be observed there. For example, the growing ageing societies in these regions have put health and social services systems under pressure to manage the rapidly increasing cost. The traditional development funding and philanthropy are not able to cover the rising needs of vulnerable groups alone. At the same time, a growth of income and the rise of the purchasing power could be observed during the last years. On the other hand, market mechanisms fail to fill the gap because they overprice risk and undervalue return opportunities in the sector often leading to paid health services targeting only urban high income target groups.

By using market-driven approaches, non-profit organisations have a unique chance to strengthen their actions to provide services to the population and vulnerable groups and anchor one pillar of their organisations' mission in a financially sustainable purpose-driven business.

**Online Training Academy** – developing business skills and incubating innovative ideas | The Program consists of two components.

The "Online Training Academy" supports teams of two persons with concrete business ideas as well as individual learning participants without business ideas to develop fundamental skills and concepts in the field of impact enterprise, such as business modelling or financial planning. Individual learners are matched to venture teams to jointly work on the real business cases. This triggers both peer-to-peer and applied learning.

The "Online Training Academy" is held fully online and thus open to participants from all over the world. Its methodology, through a mix of live webinars and individual coaching sessions, enables real-life cohort building and networking while offering the training globally at fixed costs. Participants require an investment of 3-5 hours per week to finish the course within 8 weeks. Within the pilot project, the "Online Training Academy" was offered as a "pay-as-much-as-you-can» service, with the fee serving foremost as sign of participants' commitment.

**The Master Class – the hybrid venture accelerator** | Once graduated from the "Online Training Academy", individual learning participants and teams working on impactful business ideas can join the Master Class. Also open to external early phase start-ups, this Master Class allows participants to further develop and apply acquired skills through experimental learning, face-to-face workshops, webinars and individual coaching sessions. Participants, who must cover a learner's fee of 4500€, are able to learn to understand and use business fundamental tools such as Theory of Change, Value Proposition, Revenue Models or Go-to-market-strategy in order to become investment ready by the end of the Master Class.

# Synergies with private corporations

From donors to doers

Facing the social and health crisis of tomorrow,
it is essential to count on everyone of us,
as city dwellers, consumers, public representatives
and business persons. Thanks to their resources
and skills, corporations are a strong ally of the general
interest associations. Beyond the financing needs,
private groups developed new forms of collaboration
with the National Societies rethinking their position
as donors and providing more active
and concrete support, building new synergies
between their employees and the association.

# Tecsos, addressing social needs through innovative technologies

Spanish Red Cross

Fundación Tecnologías Sociales (TECSOS), translated as "Social Technologies Foundation" is a non-profit entity created in 2002, by Spanish Red Cross and Spanish Vodafone Foundation. TECSOS Foundation brings together the social experience of the Spanish Red Cross with the technological excellence of Spanish Vodafone Foundation, with the aim of addressing social needs through the most innovative technologies that takes into account ethical aspects and contributes to improving people's skills with special emphasis on the most vulnerable.

The technological progress is revolutionising and transforming our society, they are an inherent part of our daily life both in the personal and professional sphere.

The digital tools have become universal and we have so internalised them that it is difficult for us to think of a world without the Internet, computers or mobile phones. However, their application is uneven, with sectors making intensive use of new technologies and others, such as the field of social intervention and care for vulnerable people, where its incorporation has lagged behind.

To fill this gap and under the conviction that Information and Communication Technologies could also be a very useful tool for social actors, the Spanish Red Cross and the Vodafone Foundation set up the Social Technologies Foundation (TECSOS).

Currently, the initiatives developed by TECSOS are aimed at different groups such as the elderly, people with disabilities, women victims of gender violence, children and youth, immigrants, refugees and people at risk of social or digital exclusion. The Foundation combines the social knowledge provided by the Spanish Red Cross and the technological excellence provided by the Vodafone Foundation. Both entities share vision and decision -making with the same responsibilities and the same economic contribution. The technical work team is composed mainly of engineers with a social background, allowing the sharing of experience from the social and technological fields. In relation to the Strategic Plan, it is reviewed every four years and an Action Plan is agreed upon each year to identify the projects and activities.

Both nationally and internationally, those projects and activities are aligned with the following objectives: 1. Proximity and collaboration, reaching the most vulnerable people, exchanging knowledge and promoting collaborative work and networking ; 2. Applied and sustainable innovation, addressing the real needs of the most vulnerable groups, through innovative solutions, designed for all ; 3. Ethical innovation, making ethics issues a key point between the creation of solutions and people ; 4. Influence, to be a model that is able to influence and generate trends in the development of ICT solutions adapted to the most vulnerable.

The implementation of TECSOS projects is based on an innovation process. The methodology is adapted to the social context and the application of technologies.

1. Phase of Identification of a real need from the social sphere and scope. This stage includes creativity sessions, hackathons, knowledge acquisition methodologies, etc. involving the beneficiaries and the environment.

2. Study and prospecting of technology to choose the most appropriate solution.

3. Functional and technical implementation of the solution that will cover the need that has emerged. In this phase, the technological solution is implemented, and the service, attention or interaction issued between the user and the service as well.

4. Stage of technical validation led by the TECSOS team of engineers to test that the technology works correctly.

5. Stage of validation by experts, carried out by professionals from the social sector.

6. Pilot with users. During the pilot stage, the complete solution will be validated in what will be its real scenario.

7. From the pilot to the field. In this phase the tested products and services are put into real context. TECSOS maintains a supporting role until the solution is fully implemented.

One of the added values of the Foundation is the application and ethical use of technology. Before starting an initiative, during the analysis phase, it is essential to deeply understand the needs of the users. The objective is to clearly identify how technology could help, avoiding generating false arguments. It is essential to provide clear explanations, and rely on resources or sources of verification. It is also important that the environment analysis phase involves not only the potential beneficiaries, who will be present throughout the process, but also those agents who will be key in the pilot and in the actual service. For example, when designing a service for hospitalised children, it is essential not only to speak with the children themselves,

but also with their families, nurses, and doctors as well as to become familiar with the legislation of the hospital and to know the limitations when designing the solution.

In TECSOS initiatives, technology is conceived as a tool at the service of social needs. Always under ethical, privacy and universal accessibility and design for all criteria, it makes inclusive solutions that are as humanised as possible, available to as many people as possible and take into account different levels of digital literacy.

3.2

# Kumamoto Hospital, how to integrate innovation within a healthcare facility

## Japanese Red Cross

Japanese Red Cross Kumamoto Hospital functions as an open innovation lab for humanitarian technologies by collaborating with various stakeholders such as academia, private sector and public institutions. In hospital management, facilities are often compared to a small society where all the social challenges merge together : ongoing pandemic, super aging-society, the increase of poverty, the rapid population reduction, the aging of infrastructure, energy management, issues of mobility services and climate change. Since 1980, the Japanese Red Cross Kumamoto Hospital, which is firstly nominated as a hub hospital for the international medical relief activities in the Japanese Red Cross Society, has been deploying its staff to the global disaster response operations.

This approach shows that the hospital faces the social challenges and needs the solutions both in peacetime and emergencies. Kumamoto hospital defines humanitarian technologies as "technologies to protect life and health and ensure respect for human dignity", in other words, technologies for achieving the humanitarian purposes of the International Red Cross and Red Crescent Movement.

To improve and create humanitarian technologies, the hospital focuses on the Japanese concept of *genba* (the real workplace) in the global (both domestic and overseas) humanitarian field to understand the social challenges and find the essential needs. However, the social challenges in the field are complex and cannot be solved only by the efforts of medical professionals in the hospital. Therefore, the international medical relief department at the hospital, which faces the social challenges in the global humanitarian field, has been playing a key role opening an innovation hub to collaborate with the diverse professionals from academia and private sector. To create the opportunities toward the collaboration between the hospital and other specialists, the hospital has been seeking for "serendipity" to meet the diverse specialists with humanitarian mind by participating in humanitarian missions, academic conferences on water, health, civil engineering, e-health and, joining professional associations for different topics such as mobility, drones, automatic voice translation technology, and sharing economy. In addition, the hospital staff directly visit the specialists in universities and private companies to ask for collaboration and co-creation. In the co-creation process, the hospital staff shares the social challenges found in *genba* and co-think the possible solutions with the external experts. For the external partners, this is the precious opportunity to know the essential needs to address the social challenges.  If necessary, the hospital and the external experts call another organisation or expert for joining the project.

The hospital, conceived is a small society, can be utilised as a test field for the co-created new solutions and products such as the hydrogen ambulance, developed with the support of Toyota. The hospital staff and the external experts from academia propose and share their new ideas in the academic conference on humanitarian technologies, or by using their public relations resources. In this way, the hospital has become a multi-disciplinary open innovation hub where the hospital staff and the humanitarian technology specialists from various backgrounds co-create the practical solutions for the social challenges.

The outputs of the open innovation labs are categorised in five types : 1. New Concepts, 2. Prototypes, 3. Service Models, 4. Academic Outputs, and 5. Network of humanitarian technology specialists.

These outputs benefit to solve the social challenges and contribute to improving the hospital services both in peacetime and emergencies. In the 2020 Kumamoto floods response, these outputs offered by the collaborative partners were fully utilised to support the relief activities of the hospital:

. A private company – Agoop corp, Softbank Group – offered the mobile phone locations data to the hospital's relief team in the disaster affected areas for decision making;

. A mobile flush toilet which is co-created by the hospital and Nishimu – Kyushu Electric Power Group – was installed in the disaster affected area. This innovative flush toilet can be installed without relying on the existing water supply and drainage in the disaster affected areas;

. A Hybrid Vehicle with the power supply function was loaned by Toyota Motor Kyushu as a mobility tool of the hospital's medical team.

All the costs of these activities were covered by the participating private companies as their CSR activities. In addition, among the companies that offered their services for these relief activities, the new business collaboration has started.

In this way, the open innovation model contributes not only to propose the new solutions but build up the humanitarian technology network that benefits to improve the hospital's daily medical services and humanitarian activities in emergencies.

# High or Low tech at the service of humans

Rethink your actions capitalising
on innovation tools

If employed correctly, technology is a strong tool
to improve the social impact of our actions.
When it supports and capitalises on the existing
assets, it can generate unprecedented solutions
creating a bridge between the local needs
and the challenges of tomorrow.

# Humanitech, ensuring frontier technologies benefit people and society

Australian Red Cross

Humanitech is a think & do tank working at the intersection of social innovation and technology. This new initiative of Australian Red Cross seeks to progress humanitarian outcomes through the use of responsible, ethical and inclusive use of new and emerging technologies such as blockchain, artificial intelligence and robotics. By convening the best minds across sectors and disciplines, Humanitech is exploring the role of frontier technologies in meeting humanitarian need, creating evidence through sharing, collaboration, research and experimentation, amplifying ideas and solutions with the greatest potential for impact, and influencing so that technology serves humanity by putting people at the centre and in control.

Civil society organisations are experimenting with frontier technologies to adapt to growing needs and complex operating environments. With the help of these tools, Humanitech is creating new ways to mobilise people and resources so it can better support communities in need. At the same time, recent experiences with the uses of data and technology to automate, predict, monitor and target illustrate a host of potential harms.

From the rise of the so-called digital welfare state to the rapid introduction of digital solutions in response to COVID-19, many tools can expose people and communities to new forms of intrusion, insecurity, and inequality.

Humanitech puts the spotlight on how we use technology for good, how we can mitigate the negative impacts and create the best outcome for humanity. Humanitech is creating an innovative and entrepreneurial environment in which to collaborate with other organisations, thought leaders, institutions and government in order to explore, understand and develop unique insights into the impact of emerging technologies on humanity. Humanitech will pioneer new solutions through sharing, collaboration and experimentation and help amplify ideas and solutions with the greatest potential for scale and impact.

Humanitech is progressing humanitarian outcomes across three work streams: 1. Research & Insights - Developing insights and evidence on the opportunities and risks new technologies present. Humanitech has joined hands with institutions such as the new Australian Research Council Centre of Excellence in Automated Decision-Making and Society (ADM+S) as a key humanitarian industry partner. 2. The Lab - Developing solutions from concept through launch, working with a network of collaborators across sectors.. Humanitech had also developed a Web 3 blockchain-enabled digital identity credential - Traverse -  to make it easier for volunteers in the humanitarian workforce to volunteer across multiple for-purpose organisations, whilst giving them control over their data. Traverse has been wound down due to funding challenges, an immature technology stack and the unique difficulties of trying to adopt frontier technology solutions to the humanitarian sector. A key insight from deploying frontier technologies, such as Traverse's Web 3 digital id product, to the humanitarian sector was the mismatch between frontier technologies, which are by their nature at the edge and not fully developed, and people and communities who are not yet confident in these technologies. 3. Advocacy & Influence - Contributing to research, policy and practice on the humanitarian implications of technology through policy advocacy and stakeholder engagement. For example, since late 2018, the Australian Red Cross has been participating in ongoing consultations on the Australian Human Rights Commission Human Rights and Technology Project bringing our unique humanitarian perspective to this important topic.

# I.O Me FabLab, broadening youth economic opportunities through craftsmanship

Kenya Red Cross

I.O.Me Lab is a community based innovation space with an array of Digital Fabrication tools to facilitate prototyping and small scale manufacturing of innovative ideas & products. It is located in Lamu, in the Eastern coast of Kenya, and open to everyone who wants to turn ideas into actual products through shared knowledge and peer learning. This collaborative space allows and inspires innovators, technology enthusiasts and entrepreneurs to create and quickly test new concepts, products and businesses by giving them more options through access to advanced technology, materials and production methodologies.

Lamu county is facing several issues related to both social and economic fields. Regarding economic hardships the county faces an unemployment rate of 69% and a poverty rate close to 30%. Living mostly thanks to the fishing industry and the agricultural sector, Lamu county has also developed a rich islamic-swahili culture registered by UNESCO and therefore attracting tourists from both Africa and Europe. However Somalia's proximity as well as regular Al-Shabaab's incursions threaten Lamu's development model and its youth often fall into drug-trafficking or extremism. To struggle with that trend, the Kenyan Red Cross has developed a two-step response using a facility in Hindi in Lamu County. On the one-hand, KRC has created a 100 persons-capacity rehabilitation center to cure youngsters facing drug-abuse. On the other hand, the Lab is supposed to complete the insertion program by allowing mostly former addicts, but more generally anyone who would like to take part in the program, to develop useful skills.

The Lab is a creative space that mixes both production and prototyping. If you have a know-how, like Lamu's craftsmen for instance and you can use this space – in exchange for an allowance -, you can produce and even design a brand new business model. On the flip side, if you wish to develop skills to increase your chances to enter the labour-market, the Lab offers training programs regarding 3D printing, social business mentoring or prototyping practices.

The operation flow of the lab counts:

1. Team Formation based on diversified experiences and individual interests and assigned to work on specific projects ;

2. Ideation – Brainstorming and generation of ideas that could be adopted to make the projects more viable for fabrication and implementation. A rudimentary proof of concept is done followed by a briefing session from the teams ;

3. Designing – The lab is equipped with an array of computer-controlled machines that enable rapid prototyping using different digital fabrication technologies but first the idea to be fabricated has to be designed using a computer aided design software ; 4. Prototyping- It involves the use of available machines, hand tools and materials to build the designs illustrated on the computer.

The innovators with careful guidance by the lab's experts are able to program and work with the digital fabrication tools to make intricate

cuts on wooden and metallic materials. The lab started operations in October 2020 with limited activity. This included hosting some virtual and semi virtual training in design thinking and digital fabrication. The lab, through the Qatar Red Cross funded project, also held the first prototyping week which included three teams of youths working on different projects. One team designed and built the first prototype of a rocking chair, another team designed and built an incense burner for the mosque and a miniature Lamu door while the third team designed and prototyped a cabro brick from recyclable plastic. This contributes to several outcomes, namely productive youth engagement and introduction of modern equipment and technologies for manufacturing. In early 2021, the Lab hosted a week of activity focusing on recycling and upcycling projects as well as a program targeting school going children focused on generating interest in STEM. As part of finishing space's setting-up we have also conducted interviews with local stakeholders to advocate for the Lab's development as well as spotting actual needs to design our programs accordingly.

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