SHE CODES FOR CHANGE

STRATEGY
2016 - 2020

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'*EDUCATE TO INNOVATE*'

INTRODUCTION

She Codes for Change (SCC) initiative seeks to nurture young girls to develop interest in Science, Technology, Engineering, Arts/Design and Mathematics (STEAM) careers at early stage of their careers choices through basic coding skills.
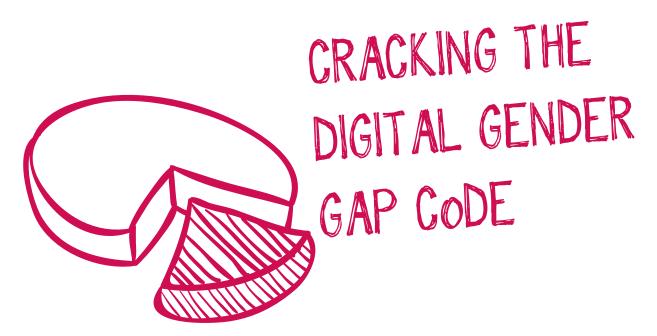
The Initiative targets three groups

- Girls aged 12-19 years old,
- Female college and university students and
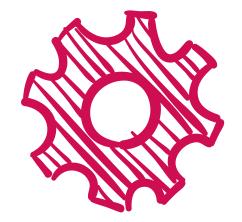- Male and female STEAM teachers.

We also work with other key stakeholders from the public and private sectors to advocate for and implement strategies for involving more girls in computer studies as part of their learning.

The studies are designed to be relevant, engaging, insightful and empowering. Our program focuses on what Tanzania can do to close the gender skills gap in computing and better meet the needs of a rapidly changing local and global job market.

Our key strategies include nurturing interest among girls in high school to pursue STEAM subjects by working with their schools to introduce ICT training, Inspiring college and University undergraduates to pursue careers in tech and support young female startup founders in their entrepreneurial journey.

We aim to increase the number of women working in computing and technology in Tanzania. We foresee She Codes empowering women in the market place and boosting the earning power of those who will graduate from our programmes.
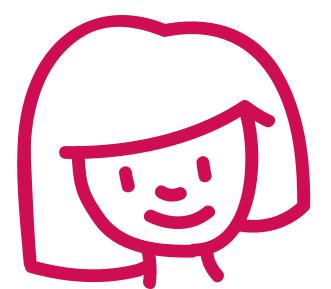
CRACKING THE DIGITAL GENDER GAP CODE

BACKGROUND

Just as it happened with the technologies of the steam, electricity and computer revolutions, the "Fourth Industrial Revolution" is transforming the world of work. Digital technologies are now becoming pervasive and reshaping all parts of the global economy.

This expansion of the computing workforce means that computing skills – with coding at the core – are among the most sought-after skills in the global job market. Yet amid this boom, research shows that women's share of the global IT workforce is declining. Research estimates that women will hold only one in five computing jobs in western countries by 2025, in Africa the gap is wider. This is both a global and national crisis with severe implications for Africa's place in the global economy and for the future of women.

For a long time technology in Tanzania has been considered as a male-dominated industry. In the past, there was a huge push for men to get into technology than women. This has been compounded by the fact that there are few women role models in the tech industry. In Tanzania the gender gap in science studies is still wide with females lagging far behind males. The challenge starts in the classroom where too few girls are pursuing studies in computing and related subjects. Also in universities and colleges the proportion of female students majoring in computing is not just low – it continues to fall dramatically.

SCC foresees significant potential growth in women's participation in computing. That means we need to act urgently if we are to reverse today's alarming trends by deepening girls' hands-on computing experience, changing girls perception of computing, supporting parents and teachers in understanding the wider role of computing, designing high school computing courses that appeal to girls, creating grassroots campaigns to motivate peer group action, attracting more women teachers, offering female students immersion programmes and creating female mentorship programmes.

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Harness the transformative potential of ICT and innovation for women's empowerment

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VISION

Bridge Tanzanian digital gender gap.

MISSION

Expose more girls in Tanzania to STEAM careers and amplify their impact in Africa and the world at large.

VALUES

Dare
Lead
Innovate
Impact
Equality

MOTTO

Educate to Innovate.

GOAL

Harness the transformative potential of ICT and innovation for women's empowerment.

OBJECTIVE 1

Build digital capacities among girls and young women

Invest in digital literacy, confidence and skills development for women and girls

Encourage girls' participation in STEAM careers

Support development of digital content applications and services by and for women

OBJECTIVE 2

Mentor and Expose girls and young women to technology and Innovation careers

Support internship and volunteering opportunities on ICT and innovation among girls and young women.

Run exchange program to strengthen national and International cooperation in ICT and innovation.

Support creation of media platforms for capturing and sharing good practices in ICT and technology.

OBJECTIVE 3

Foster and accelerate tech-businesses by young women

Create innovative spaces for young female innovators.

Run ICT and innovation acceleration program for yong women

support innovative start-ups by female founders.

OBJECTIVE 4

Advocate for gender responsive strategies and policies aiming at closing digital gender gap
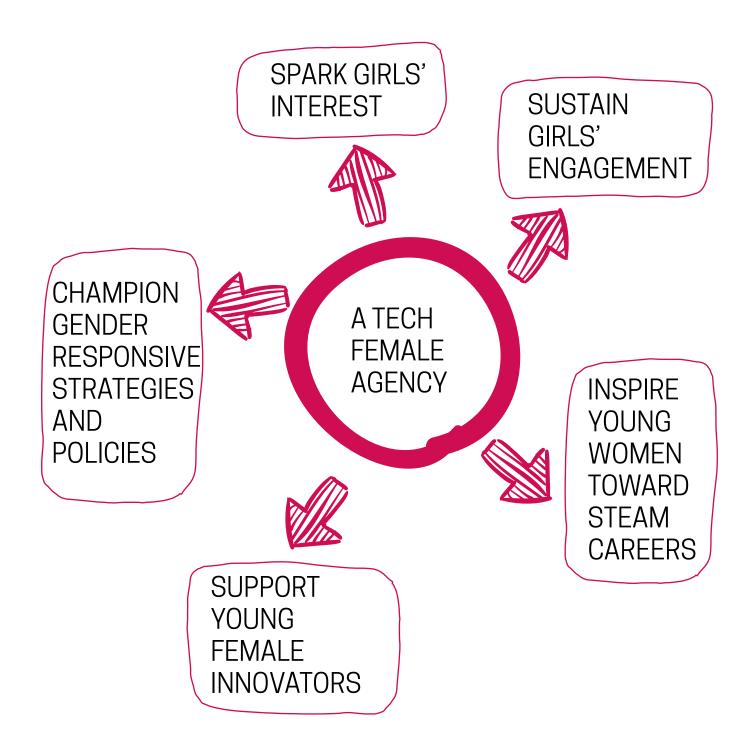
Promote development of affordable technologies to increase public access to information and services.
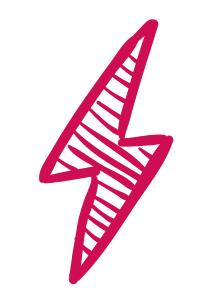
Champion for data and M&E tools around gender equity and ICT inclusion

Promote women recruitment, retention and promotion to decision making positions in the technology sector.

OUR FOCUS APPROACH

SPARK GIRLS' INTEREST

SUSTAIN GIRLS' ENGAGEMENT

CHAMPION GENDER RESPONSIVE STRATEGIES AND POLICIES

A TECH FEMALE AGENCY

INSPIRE YOUNG WOMEN TOWARD STEAM CAREERS

SUPPORT YOUNG FEMALE INNOVATORS

FOCUS AREAS

SPARK GIRLS' STEAM INTEREST

Deepen girls' hands-on computing experience.
We will create opportunities to generate enthusiasm among young girls by introducing them to coding in fun ways through basic coding experiences. We will build the capacity of young girls and create their foundation in coding in three important areas application and mobile development, gaming and making (maker-tronics).

Change girls' perception of computing.
Research show that girls who think computing is cool will likely have an 11% greater interest in computing, and those who think computing is "for girls" will have a 25% higher interest than those who don't. We will support efforts to establish girls coding clubs and utilization of computer labs (cLabs) at school and at the broader national level to tackle stereotypes.

Support parents and teachers in understanding the wider role of computing.
Young girls don't get much guidance from adults on how working in ICT can enable them to realize their career aspirations zanian tech journalists to inspire girls to pursue career in STEAM. We will initiate 'Coding Teachers' program to combine technical education with a greater appreciation for the dynamic role of computing in business strategies. We will also create parents STEAM guide manual for parents and guardians to utilise guiding girls in STEAM careers.

Build the capacity of young tech journalists.
We will work with the media industry to change how computing and coding are covered in the media. Research shows that portrayals of men as computer scientists and engineers in family films outnumber portrayals of women by 14.25 to 1.13. We will work with community, national and international traditional and new media to create a network of Tanzanian tech journalists to inspire girls to pursue career in STEAM

SUSTAIN GIRLS' STEAM ENGAGEMENT

Design secondary school computing courses that appeal to girls.
We will champion efforts to increase the availability of computing and coding studies in all public and private secondary schools, also inspire actions aiming at providing more innovative and engaging teaching. We will work with schools through and pilot our model curriculum that features computing courses. We believe that our hands on approach to learning will spark girls' interest in STEAM careers.

Create grassroots campaigns to motivate peer group action.
Understanding that teen girls are highly impressionable, we will create grassroots action through partnering with the government and conduct industry-driven branded campaigns designed to dispel the myths about computing – geeky, only-for-boys and so on – and explain how people who work in computing can help improve the world. We will run campaigns targeted at motivating girWls to pursue STEAM. We will also encourage them to be proactive in using computing to support their peers, such as developing apps that address girls' issues at school or that foster girls' collaboration and a girl child self-support.
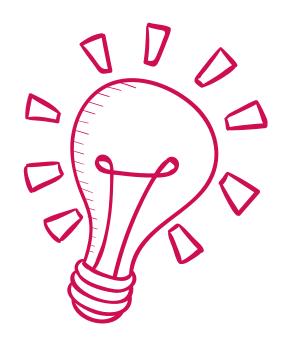
Attract more men and women STEAM teachers.
Inspiring STEAM teachers have proven to be the reason to inspire girls to pursue STEAM careers, and the uplift is even greater if those inspiring teachers are female. Hence we will work to advocate for increase of number of STEAM women teachers in secondary schools, and provide role models for girls. Also through our program 'Coding Teachers' will work to build their capacity in preparing for their lesson plans, with real-world examples of how computing is transforming various industries, from entertainment to healthcare to hospitality. We believe teaching is likely to be more inspiring if the teaching profession and businesses are collaborated to bring young technology professionals into schools as storytellers and mentors. The more high school girls can appreciate today's transformative power of digital within every field and every industry, the more they will see its value in their own futures.

INSPIRE YOUNG WOMEN TOWARD STEAM CAREERS

Develop and run female students' immersion programmes.
Research shows young women in college or university are open to converting to STEAM career, specifically in computing field while enrolled in college or university. We will offer undergraduates in select colleges and universities an opportunity to participate in holiday immersion programmes to experience the computing/coding and innovation world.
Our program will focus on skills such as intensive instruction in computer gaming, web and mobile app development and introduction to electronics and making and exposure to speakers, demos, workshops, and presentations from female engineers and entrepreneurs; field trips to technology companies, start-ups, and academic institutions.

Create female mentorship and role model programmes.
Female undergraduates desire someone who encourages them to major and pursue STEAM career. Also the influence of role models is strong among women who don't study computing at college but then go on to pursue a computing career.

We will develop and run a mentorship program - involving top female executives, entrepreneurs and engineers who will provide career and academic mentorship; we will also coordinate volunteering and internship opportunities for girls to get exposed to the tech world.

SUPPORT YOUNG FEMALE INNOVATORS

Establish national and regional innovation spaces for young female innovators.
We will run Binti Hub, a Tanzanian business tech program. We will work with colleges and universities across Tanzania to establish Binti Hub. Binti Hub will consist of innovative spaces and labs that will aim to impact female run startups.

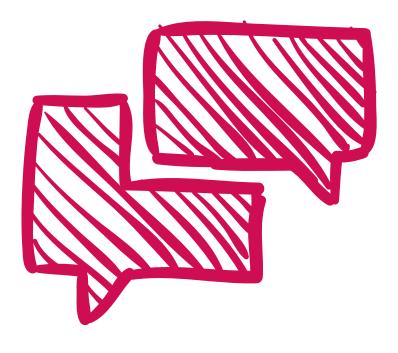***Develop a national based acceleration program for young innovators.***
The acceleration program will be for three months with students meeting experts and mentors to help them develop their ideas, projects and research further. The best of the ideas from the program will receive seed funds and continuous support while the rest of the ideas introduced to partners and potential sponsors to scale their projects further.
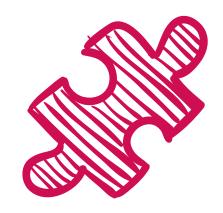
CHAMPION GENDER RESPONSIVE STRATEGIES AND POLICIES

Advocate for digital inclusiveness.
We will work to champion gender perspective in global, regional and national ICT strategies, policies, plans, and budgets. This includes active involvement of women throughout the design, implementation and monitoring of strategies and policies. We will also work to ensure that existing policies are reviewed for gender responsiveness.

We partner with the government to see that Tanzania implements data, monitoring and evaluation tools around gender equality and ICT, including for measurement of access and use, and also invest in research and analysis to assess the impact of ICT for gender equality and women's empowerment. We will work to ensure that women and girls have affordable access to ICT in line with global targets, with particular attention paid to women in rural areas. We will champion provision of gender responsive models of public access and infrastructure, design and development of affordable technologies and services, development of supportive policies and use of mechanisms like universal service funds, and through other outreach efforts.
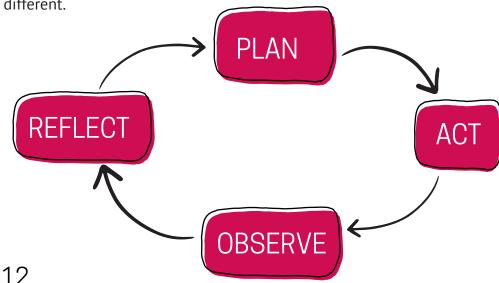
PARTNERSHIPS

Partnerships plays a key role in a successful implementation of our strategy. We will form new partnerships while strengthening existing ones with government, private sector, international development partners, and academic institutions, among others.

The partnership engagement focuses on projects implementation, dialogue and meetings, outreaches and participation in our media, arts and innovation spaces. We will work together with the partners to design modals and approaches to address digital gender gap and address development challenges outlined in this strategy.

LEARNING, MONITORING AND EVALUATION

SCC is a learning initiative. Our learning generates documents and digital outputs that communicate contextual lessons, good practices, and insights – about what works and what doesn't and why. Mitigated risk-taking and innovation, and experimenting with new approaches is highly encouraged. A set of internal monitoring tools will be established and we will involve an independent body to undertake organizational evaluation on a periodic basis. Throughout, emphasis will be placed on measurement of impact, outputs and outcomes. For both learning and accountability for results. We view risk-taking, innovation and honest self-criticism as crucial features of any change effort and mistakes as an opportunity to learn lessons and try something different.

PLAN

ACT

OBSERVE

REFLECT

OUR THEORY OF CHANGE

CHALLENGES   **INTERVENTIONS**   **OUTCOMES**

CHALLENGES	INTERVENTIONS	OUTCOMES
Lack of inspiration for girls to pursue STEAM subjects.	Inspire girls to pursue STEAM subjects. / Support TECH journalism.	Increased girls interest in STEAM subjects and careers.
Lack of sufficient women's participation in technology.	Run exchange programmes in TECH and innovation / Coordinate internship and voulnteeting opportunities for young girls and women aspiring to pursue TECH careers.	Increased female participation in TECH and innovation.
Limited support to young female innovators.	Create female led innovative hub spaces. / Support young female innovators' start-ups.	More women led tech startups founded.
Few femal mentors in technology.	Develop and run TECH based mentorship program for girls and young female innovators.	Expanded network of girls and young women innovators.
Lack of responsive strategies and policies and gender inequality in ICT.	Advocate for clear strategies and policies / Champion model curricula for adoption	Improved strategies and policies. / Endorsment of use of ICT and Innovation curriculums in schools

IMPACT
Empowered girls and women through inclusive ICT and innovations

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SCC Goal 2020

Goal: Harness the transformative potential of ICT and innovation for women's empowerment.

Tanzania Vision 2025

Goal: Achieving good quality life for all, good governance and rule of law and buidling a strong and resilient economy that can effectively withstand global competition.

African Union Agenda 2063

Aim: All segments of African society to work together to build a prosperous and united Africa based on shared values and a common destiny.

United Nations SDGs Agenda 2030

Aim: Transforming our world for sustainable development.

THEMANTIC FOCUS AREAS ALIGNMENT WITH THE NATIONAL VISION AND INTERNATIONAL AGENDA

Build digital capacities among girls and young women.
• Invest in digital literacy, confidence and skills development for women and girls.
• Encourage girls' participation in STEAM careers
• Support development of digital content, applications and services by and for women

Mentor and Expose girls and young women to technology and Innovation careers.
• Support Internship and Volunteering opportunities on ICT and Innovation among girls and Young women
• Run exchange program to strengthen national and International cooperation in ICT and Innovation
• Support Creation of Media Platforms for capturing and sharing good practices in ICT and Technology.

Foster and accelerate tech-businesses by young women.
• Create Innovative spaces for young female Innovators
• Run ICT and Innovation acceleration program for Young Women
• Support Young female Innovators start-ups on resource mobilization

Advocate for gender responsive strategies and policies aiming at closing digital gender gap.
• Promote development of affordable technologies to increase public access to information and services.
• Champion for Data and M&E tools around gender equity and ICT inclusion
• Promote women recruitment, retention and promotion to decision making positions in the technology sector.

3.1 High quality Livelihood.

A high quality livelihood for all Tanzanians is expected to be attained through strategies, which ensure the realization of the following goals:
• Universal primary education, the eradication of illiteracy and the attainment of a level of tertiary education and training that is commensurate with a critical mass of high quality human resources required to effectively respond and master the development challenges at all levels.
• Gender equality and the empowerment of women in all socio-economic and political relations and cultures.
• Access to quality primary health care for all.
• Access to quality reproductive health services for all individuals of appropriatex ages.
• Universal access to safe water.
• Life expectancy comparable to the level attained by typical middle - income countries.
• Absence of abject poverty.

Goal 1: A high standard of living, quality of life and well being for all citizens.

Goal 2: Well educated citizens and skills revolution underpinned by science, technology and innovation.

Goal 5: Transformed economies and jobs.

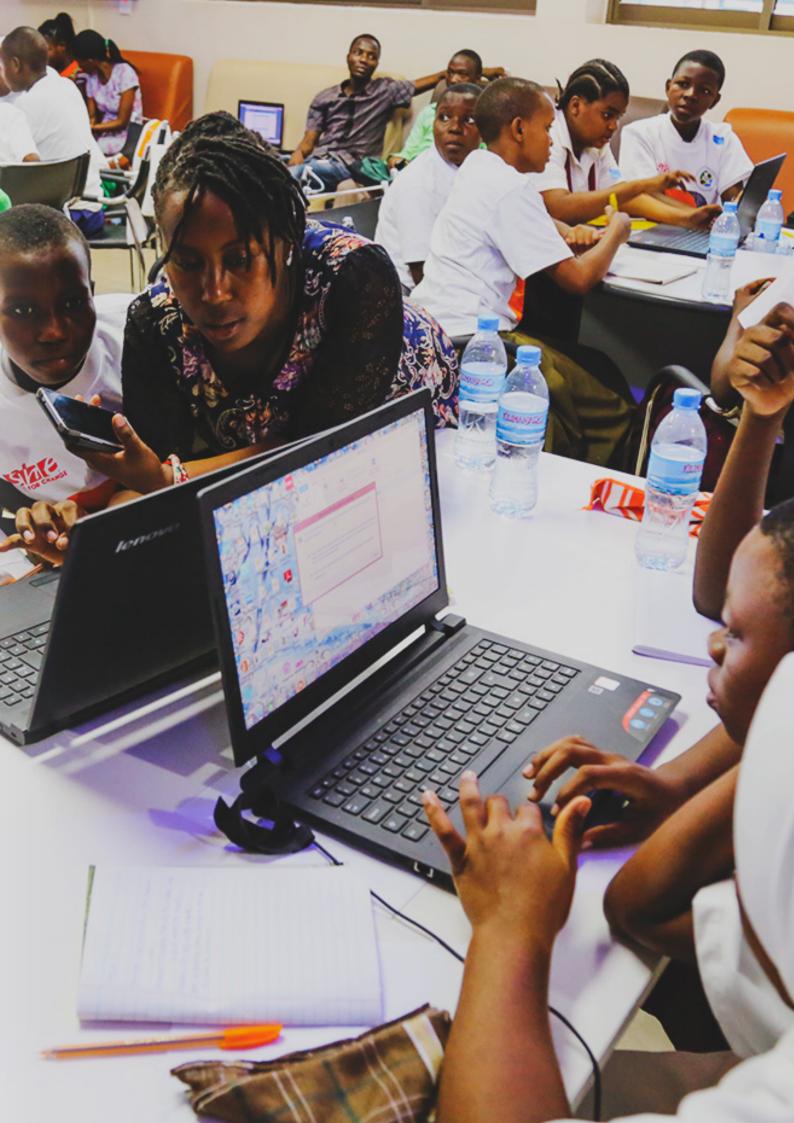**Goal 15:** Full gender equality in all spheres of life.

Goal 16: Engaged and empowered youth and children.

Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

Goal 5: Achieve gender equality and empower all women and girls.

Goal 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.

Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.

EDUCATE TO INNOVATE

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