**Summary Project Description**

The purpose of this project is to construct dormitory accommodations for boys and girls to stay at the residential center and to facilitate the innovative integrated-STEM curriculum that the Tumaini Innovation Center (residential vocational school/STEM high school) has developed for former street youth. This would enable Tumaini to expand its community-focused technical and vocational training for students into a community demonstration center, better accommodate additional street youth.

**Motivation**

Kenya is facing a crisis of a ballooning number of unaccompanied youth, as an estimated 300,000 “street youth” (children who work and/or sleep on the streets[[1]](#footnote-1)), or SY, live in Kenya[[2]](#footnote-2). This population is difficult to support in traditional Kenyan schools due to transience and taboos. In Eldoret (western Rift Valley), as corroborated by studies across the region, providing support for SY has to address complex factors affecting different groups. For example, while boys are a higher proportion of the SY population and experience significantly higher interactions with legal authorities, girls (still approx. 40% of SY) have much more limited options for income generation[[3]](#footnote-3). Studies of SY in western Kenya have identified multiple levels of hardship that children face: academic/educational, socioemotional, and physical/psychological, including disproportionate morbidity of infectious disease, PTSD, and nutrition[[4]](#footnote-4). At the same time, the growing number of SY represents significant untapped potential in fields like engineering[[5]](#footnote-5); SY can be harnessed as a boon for the economy or be relegated to pursuing illicit income sources or participating in terrorist activities. Thus, there is a critical need for effective schools that empower SY and realize their creative potential.

The Tumaini Innovation Center (Tumaini) is an alternative primary, secondary, and vocational school for former SY, and it has been piloting innovative methods for teaching students integrated and rigorous academics, life skills, and intra- and inter-personal support, preparing students both for employment or tertiary education. Tumaini (OSI) for the past 13 years on holistically serving SY needs, ***propose a combination of construction and commodities to build dormitories that would better support Tumaini’s mission***.

This project would empower Tumaini to meet the demands placed on it by the community and local government to expand its novel programs to serve a larger number of SY and interested community students.

**Project Aim and Objective**

Our overall aims are twofold. First, we seek to empower the unique capabilities of SY for creativity and innovation, adaptable job market needs, and future learning. Second, we seek to empower Tumaini as a regionally- and nationally-recognized demonstration school to diffuse research-based educational practices in STEM learning.

**Objective: Expand housing to accommodate 100 residential SY (boys and girls in dedicated accommodations) and equip the dormitories to be green and secure.** Tumaini was first established in response to SY requests for a formal school that included a residential component, for holistic support away from the street. The initial 20 pilot student “pioneers” have put the school on the map as a leader; facilities are needed to accommodate the number of interested residential students and the number the local government wants to see supported at Tumaini. We will construct 2 large single-sex dorms, and include facilities for residential social work and security staff to provide holistic security and support for SY learners[[6]](#footnote-6). These dorms will also implement best practices in green energy, allowing students to continuously learn on their own space, providing input on solar panel design, monitoring, and calculating power usage, aligned with the integrated engineering curricula (Figure 1).

**Budget**

|  |  |
| --- | --- |
| **Items** | **Cost** |
| Cement, Sand, Blocks for construction | $30,000 |
| Wood, and metal materials | $6,000 |
| Roofing, painting, flooring | $10,000 |
| Beds, mattresses, blankets, sheets, storage spaces | $15,000 |
| Construction labor | $9,000 |
| Transportation charges | $5,000 |
| **Total** | **$75,000** |

1. UNICEF, A. A study on street children in Zimbabwe. *Eval. Rep.* (2001). [↑](#footnote-ref-1)
2. Steffen, B. The Chronic Urban Emergency in Rift Valley, Kenya: Report from profiling children connected to the streets in Rift Valley Province. *Child. St, Ed. UNICEF, Save Child.* (2012). [↑](#footnote-ref-2)
3. Sorber, R., Winston, S., Koech, J., Ayuku, D., Hu, L., Hogan, J., & Braitstein, P. Social and Economic Characteristics of Street Youth by Gender and Level of Street Involvement in Eldoret, Kenya. *PLOSOne.* (2014). [↑](#footnote-ref-3)
4. L. Embleton, D. Ayuku, L. Atwoli, R. Vreeman, and P. Braitstein, “Knowledge, Attitudes, and Substance Use Practices Among Street Children in Western Kenya,” *Subst. Use Misuse,* vol. 47, no. 11, pp. 1234–1247, Aug. 2012. [↑](#footnote-ref-4)
5. E. A. Hanushek & L. Woessmann, The Role of Cognitive Skills in Economic Development. J. Econ. Lit., 46(3):607–668, 2008. [↑](#footnote-ref-5)
6. L. Atwoli et al., “Impact of Domestic Care Environment on Trauma and Posttraumatic Stress Disorder among Orphans in Western Kenya,” PLOS ONE, vol. 9, no. 3, p. e89937, Mar. 2014. [↑](#footnote-ref-6)