



HNP is a non-profit organization registered in the USA and Kenya, endeavoring to bring affordable and reliable infrastructure to slums and other marginalized communities through clean technology. The HNP Solution/Innovation called the “Town Center” delivers municipal services coupled with social and financial empowerment from a single building structure which provides an infrastructure of opportunity. Many of these new service technologies are in first deployment and are the core to the success for Town Center Program.

HNP is governed by its board, which consists of nine members. The members are Connie Nielsen (President & Co-Founder), David Warner (Secretary & Co-Founder), Ken Kao, Professor Daniel Kammen, John Gage, Jim Wunderman and Dick Beahrs. In early 2012, HNP received its 501-C3 status. HNP currently has an active Kenyan Project Director, Juliet Dima, and an active Kenyan operations organization, and is registered as an NGO with the Kenya NGO Board. It is also partially funded to fulfill its obligation to build its first pilot project in Nairobi, Kenya.

Our concept brings together access to clean water, sanitation, power, education, information, communications and credit in one centralized, locally owned and managed Town Center. The Town Center will provide a platform to launch appropriate technology being developed by our collaborators to solve the wider sanitation, water and hygiene problem in slums and the developing world, while creating a unique Impact Evaluation and data collection for an extended user and technology learning experience.

HNP has brought together prominent scientists and professionals* to work in a collaborative, linear organization, in which consensus is constantly created through rapid and inclusive communications networks within the organization. HNP has created its own innovative wastewater management system and has also established a site-specific micro grid to sustain the energy requirements of the center (PV, Bio diesel and hot water panels).

HNP believes that water and sanitation do not necessarily create the economic surplus necessary to maintain the proper functioning of its apparatus, and also believes that infrastructure must create real economic growth in communities to eradicate extreme poverty. This is why our concept provides for a large package of synergistic services designed to create economic growth while creating sufficient income for the Town Center, enabling it to maintain and manage itself in a Coop structure.

Further, HNP’s Town Centers will host a Green Market Place where Clean Tech solutions to infrastructure and quality of life problems are made available with financing plans. Also the Town Centers will host HNP’s Boots on the Ground access platform for Academics, and Corporate CSR/Market development missions, where collaborators



have direct access to the community but from a high speed internet connected, fully viable Town Center. Lastly, we believe HNP's strategy for a quick scale-up of operations is a viable Clean Tech solution to providing sustainable infrastructure to a rapidly urbanizing and economically growing, developing world.

****scientists and professionals***

Dan Kammen – Head of Department of ERG – UC Berkeley & co-winner of the Nobel peace prize for the scientific work behind An Inconvenient Truth

John Gage – CTO (retired) of Sun Micro Systems & co-author of Java Script, advisor to President Obama on networks

Ken Kao – CEO Kao Design, lecturer Harvard GSD, Author, and lead designer of Sir Richard Branson's Necker & Mosquito Islands Green Resorts

Jim Wunderman – CEO Bay Area Council

Richard (Dick) Beahrs – Environmental Leadership Program UC Berkeley, Media executive Time Warner

Jonathan Kaplan – founder of Flip Digital Video, Entrepreneur

Norman Hantsche – CEO Questa Engineering

Professor John & Jonathan Todd - MIT, CEO Ecological Design

Connie Nielsen – Actor, Founder HNP

David Warner – CEO Redhorse Constructors, Co-founder HNP

Collaborating Departments and Corporations:

UC DAVIS Department of Engineering & Environmental Design, Harold Leverenz

Department of Nutritional Genomics (Agriculture & Environmental Sciences) Dr

Rodriguez

Graduate School of Management – Professor Stephen Currall

Vice Provost of Undergraduates – Patricia Turner

UC Berkeley Department of ERG – at CNR

Haas Business School – Kristiana Raub, George Scharffenberger

ELP – Robin Marsh

Salesforce

Marker 7

Burr Pilger Mayer

Nielsen Consulting

Kao Design

Questa Engineering

DTR

Clean Concrete Technologies

Ministry of Cooperatives, Kenya



PROJECT DESIGN AND IMPLEMENTATION

1. **The Well** - HNP has drilled the well in our Town Center pilot project, the first of a series of water-provision projects world-wide, that yields 500 cubic meters of water a day of pure water with less than 190 mg/l Total Dissolved Solids.
2. **The Coops** - HNP is creating the social, economic, cooperative shared-ownership institution to manage and govern the provision of clean water with a targeted membership of 1,500 households. (See attached Coop info in Illustrations & Blueprints)
 - a. A **Savings and Loans coop** to provide affordable credit has been registered with the Kenya Coop Ministry and had its First General Meeting on April 18th 2013.
 - b. **The Town Center Coop** - The statutes & legal protections of HNPs management system, business plan and Concept, Rules and regulations and Bylaws for the Town Center Coop are currently being drafted in collaboration with Kenya's Ministry of Coops and HNPs Nairobi based lawyers, Orina Riechi Partners. A list for the lottery of group memberships is being drafted in collaboration with HNPs Community Coordinating committee.
3. **Legal leases and Permits** - The Town Center pilot project has obtained a 30-year lease from the government of Kenya, including the total bundle of rights for all water, space, construction, and commercial use, for a 39-meter by 9-meter plot of land in Kibera. (See attached Corporation Docs in Illustrations & Blueprints)
4. **Construction** started in Dec 2012 with due date 25th September 2013
HNP is completing construction on a 1000 square meter Town Center building with shower, toilet, and communal facilities.
5. **Community** - HNP has spent three years building community and political support for this community management cooperative, with thousands of participants.
 - a. **The Community Coordinating Committee (3Cs)** a group of elected representatives from our area's CBOs, through whom we consult and communicate with the community
 - b. **Road to Freedom Scholarship (RFS)** HNP is sponsoring 19 vulnerable children from Kibera; they are attending St Patrick Hill's Boarding and Preparatory School in Nairobi, and Dominican University, San Rafael, CA, USA
 - c. **The Management Trainees** a group of equally represented men & women with balanced ethnic representation
6. **Households**
The Town Center will reach a potential community of ten thousand households with a further potential of build-out into surrounding clusters of household from its location in the slum.



7. Capacity Building - HNP has formed a management and technical school, whose students are exclusively from the Kibera community (inclusive of all ethnicities and gender), training a group of thirty students in sustainable business management, Economics and Technology, so that they may manage the center, recruit and train the next generation of managers for future Town Centers, and search for and integrate new technologies in future Centers.

MONITORING, EVALUATION AND LEARNING

HNP is evaluating success in several dimensions.

- a. Whole-system sustainability
- b. Replicability
- c. Impact on formation of human social structures that endure.
- d. Evolution toward complete energy self-sufficiency, utilizing new energy sources, and newly designed, highly-efficient sludge and trash energy sources.
- e. Formation of new human skills of management, adaptation of technology to human needs, community organization and development, and sustained entrepreneurship.
- f. Impact on human health. Our baseline health measurements come from the past seven years of bi-weekly basic household survey data collected by US CDCⁱ
- g. Empowering women both in governance and business opportunities that the Town Center supports.

ⁱ (Kibera KEMRI Complex office) in door-to-door surveys conducted by Kiberans; surveys have been continuously conducted in our basic service communities of Gatwekera (10,000 households), Olympic (8,000 households) and Soweto West (9,000 households). Simply, water-borne disease rates reach 20% of children less than 5 year old. Infant mortality rates IMR in Kibera are 106 per 1000 newborn; Sweden's rate is 5. Under five mortality (U5M) in Kibera is 187; Sweden is 5. Shigellosis affects 1 person of 200 in Gatwekera, as measured by CDC. Our facility will significantly enhance and supplement the fecal material collection and surveillance system now designed by CDC. Our evaluation is simple: bring down IMR and U5M.