

While increased globalization is allowing for a rapid interchange of ideas, goods, and money for some sectors of society, a vast percentage of the world population is being left behind and not reaping the benefits of the global interchange.

Additionally, for the economically disenfranchised, living conditions are comparable to (or below) the standards of pre-twentieth century slums in now industrialized nations. A brief look at the current situation reveals some startling statistics. At the beginning of the twenty-first century, a significant percentage of the world population has no access to safe drinking water (17 percent), sanitation (40 percent), electrical power (31 percent), telecommunications (65 percent), literacy education (15 percent), or decent shelter (15 percent). For this population, both in developing nations as well as in industrialized ones, these basic daily needs are considered luxuries. The advancements of information technology or developments like the “smart house” are unimaginable or irrelevant for people who have never had plumbing or electricity.

But it is possible to overcome these conditions by applying the simple technological advancements made by various disconnected groups (often by the users themselves) scattered throughout the world. Many items such as clay water filters (which effectively screen out the most common types of bacteria), clean fuel stoves (reduce smoke related lung disease), and dome pit latrines (low-cost sanitation) address the critical needs of many communities through inexpensive solutions. Escher GuneWardena’s LivingKit project proposes a knowledge distribution system that will make it possible to share such information and develop local expertise, allowing poor communities around the world to improve their physical living conditions and quality of life.

Having identified six basic needs pertaining to a minimum standard of dwelling: water (harvesting, purification, and storage), sanitation (collection and recycling as an energy source), food (storage and preparation), energy (sustainable sources for cooking, lighting, and heating), communication (basic means of access to information and emergency assistance), basic shelter (protection from the elements and provision of security), the LivingKit project would provide a system of access to simple, inexpensive technological solutions that address each of the six needs.

Through existing conduits (such as urban and rural aid organizations, schools, and research groups) and by establis

LIVINGKIT IDENTIFIES SIX BASIC NEEDS THAT NEED TO BE FULFILLED TO ASSURE A MINIMUM STANDARD OF LIVING: WATER, SANITATION, FOOD, ENERGY, COMMUNICATION, AND BASIC SHELTER. USING AN ONLINE CATALOGUE LIVINGKIT PROVIDES A SYSTEM OF ACCESS TO SIMPLE, INEXPENSIVE TECHNOLOGICAL SOLUTIONS THAT ADDRESS EACH OF THESE SIX NEEDS.

LIVINGKIT SHOWS HOW THE MOST BASIC NEEDS CAN BE SATISFIED TO ENABLE A MINIMUM LIVING STANDARD.

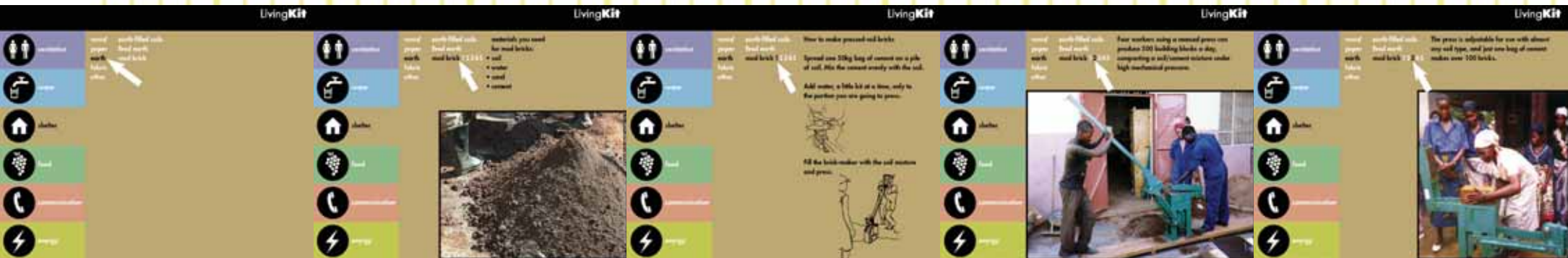


hing new knowledge distribution/exchange posts at application sites, a digital network would connect people and their solutions in one place to others in need in various locations, allowing local adaptability of products and knowledge transfer across continents. The increasing affordability of cell phones, hand-held computer devices, and laptop computers can ease the dissemination of information even to the most remote rural areas.

Such a system of information sharing would further enable a de-centralized, less hierarchical manufacturing and distribution process of the products themselves. The current norm expends a great deal of energy simply on the transportation of goods post-production: a “heavy” system. In the digital network paradigm—a “light” system—much of the production can occur on site or locally, with a minimum of materials and technological ideas coming from afar. For example, a wind turbine for generating electrical energy can be built in South America using technology and digital plans developed in Africa and perhaps a few parts industrially manufactured in China. On the implementation end, a user would first, recognize a need, such as water purification, second, identify the locally available materials, and finally arrive at a solution from the LivingKit catalog in the network. “High technology” could be used to develop materials and products as well as to disseminate information on them to users employing “low technology” materials and “do-it yourself” methods of production. Furthermore, most of the solutions in the LivingKit do not rely on infrastructure, which is usually lacking in rural and urban poor

communities. Services such as water access, sanitation, and energy, can be managed individually or by small communal groups to which governments cannot or refuse to provide aid. Once introduced to a community, most of the solutions are self-seeding, providing prototypes easily replicated by those who come into contact with them. The system could be deployed immediately, offering a variety of existing and emerging ideas and products to alleviate the deplorable living conditions caused by poverty or catastrophe in many parts of the world.

While this approach is a shift from the prevailing market-based mode of producer nations selling goods and technology to consumer nations, much information applied to development projects in poor communities is already open source (freely shared by their originators), especially among groups that promote sustainable living. We have the knowledge to enable a better future for more people. The task is to share that knowledge.



**Escher GuneWardena Architecture  
LivingKit**

**Team**

**Escher GuneWardena Architecture:**  
**Frank Escher and Ravi GuneWardena**  
**Project Team: Bojana Banyasz, Blair Ellis, Brian Hart, Hillary Jaynes and Anupama Mann**  
**Graphic Design: Judith Lausten and Renee Cossutta, Lausten & Cossutta Design**  
**Technology Advisor: John Ingersoll, P.E., Ph.D., Helios International, Inc.**

Escher GuneWardena's work addresses issues of sustainability, affordability, and the dialogue between form and construction. They seek simple formal solutions for the complexities presented by each project, investigating the characteristics intrinsic to the work itself. Their work, comprising residential and commercial, master planning and institutional projects, has been done in the United States, Canada, and Europe, and has been published and exhibited internationally. Among their recent projects is Dwell House II, the winning entry of a competition sponsored by Dwell Magazine, designed to reconcile issues of sustainability with the aesthetics of modernism.

Frank Escher grew up in Switzerland and studied architecture at the ETH (Eidgenössische Technische Hochschule) Zurich. He is the editor of the monograph John

Lautner, Architect, (Artemis, London, 1994; Princeton Architectural Press, New York, 1998). He is former president of the Los Angeles Forum for Architecture and Urban Design, and now is a member of the advisory board. Ravi GuneWardena, originally from Sri Lanka, was trained at California State Polytechnic University, Pomona and in Florence, Italy. He currently serves on the Hollywood Public Art advisory panel of the Los Angeles Community Redevelopment Agency.

Lausten & Cossutta Design, the graphic design studio established in 1984 by Judith Lausten (MFA, California Institute of the Arts) and Renee Cossutta (MFA, Yale) focuses on publication and book design, informational graphics and signage program design. Their work has received numerous awards from professional design organizations, both nationally and internationally.

The technology advisor on the project team is Dr. John Ingersoll, principal of Helios International Inc. This engineering consulting firm specializes in the development and implementation of sustainable solutions in the built environment and in transportation, and has extensive experience in technology research and development projects in both industrialized and developing countries.

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