

The Business of Humanity®



Powering the Future



“When you recognize the extreme complexity and uncertainty caused by globalization, the demands of multiple and increasingly powerful stakeholders, and the necessity of innovation, the Business of Humanity® Project offers a potent strategic response to all of these forces.”

— **John C. Camillus**, The Donald R. Beall Professor of Strategic Management, Joseph M. Katz Graduate School of Business and cofounder, Business of Humanity® Project

On the cover: Homework and a safer environment under a BoH installed street light

Overview – Who We Are

The Business of Humanity® Project is based on the proposition that strategic decision making that employs criteria falling under the rubric of “humanity,” in its two dimensions of “humaneness” and “humankind,” leads to superior economic performance and enduring value.

The Business of Humanity® (BoH) proposition captures the progression of thinking regarding strategic management. The initial 1970s model adopted the classic problem-solving approach¹ and gradually progressed to the recognition that strategic issues often are “wicked problems”² requiring entirely innovative responses. This leads to the current BoH understanding that builds on the recommended responses to wicked problems and intelligently incorporates and integrates social benefit in business models as a means to enhance profits.³

The BoH proposition—that business models and strategies, which incorporate social benefit as a goal integrated with the goal of economic value added, achieve greater profits and sustainability—has been studied over several years.

This research relating to the Business of Humanity® proposition has focused on selected organizations that appeared to have employed BoH strategies in elements of their businesses. The underlying logic supporting the Business of Humanity® proposition was derived from observations of the practices in and experiences of organizations, including Alcoa, Arvind, Coca-Cola, DuPont, Dow, Ford, iGATE, Lilly, Nasscom, Tenet, and Vodafone. The desirability and, indeed, necessity of adopting a global perspective emerged, supporting the conclusion that the goal of serving humankind effectively leads to a richer and more meaningful identification of needs that can be profitably served.

BoH strategies incorporate the following axioms:

- Define and commit to a “big hairy audacious goal” that empathetically and systemically addresses the critical needs of disadvantaged communities.
- Develop and implement an **innovative business model** with a distinctive, unique value chain, which is most readily accomplished by employing a **disruptive technology**.
- Stimulate and sustain innovation—both **reverse innovation** and **glocalization** (bi-directional exchange of technology between developing and developed economies)—and **entrepreneurship** by connecting:
 - A developed economy (e.g., Germany; United States) with a developing economy (e.g., Rwanda, India).
 - The innovation ecosystems in two complementary industries (e.g., automobile and information technology; information technology and health; health and energy).
- Create **alliances/partnerships** and agreed upon governance processes with **community leaders, government agencies, nongovernmental organizations/foundations, and academic/research institutions**.
- Seek to generate **economic value added across the entire supply chain** and share the profit added with stakeholders with a particular focus on customers/clients with limited or no income.



**“Beyond establishing
a dramatically new
organizational paradigm,
the Business of Humanity®
is an impactful and
inspiring project.
We use strategy and
engineering innovation
principles to transform,
sustainably, the quality
of life of real people!”**

— **Dr. Bopaya Bidanda**, Ernest Roth
Professor and Chair of Industrial Engineering,
Swanson School of Engineering and
cofounder, Business of Humanity® Project

What We Do

Since 2011, the Business of Humanity® (BoH) Project has progressed from researching the BoH proposition through developing and offering graduate courses presenting theory and practice to implementing prototypical BoH business models intended to be the stimulus and guide for replications globally.

The BoH Project, most notably, has:

- Researched and developed case studies of companies in Asia, Europe, North America, and South America that employ strategies aligned with the BoH proposition;
- Conducted several international conferences on the BoH proposition, bringing together businesses, foundations, government agencies, industry associations and universities;
- Designed and successfully offered a graduate course in MBA and executive MBA programs in three countries titled the Business of Humanity®: Strategic Management in the Era of Globalization, Innovation, and Shared Value;
- Published a book—*The Business of Humanity®: Strategic Management in the Era of Globalization, Innovation, and Shared Value*—on developing and deploying BoH strategies; and
- Initiated global demonstration projects—building prototypes in the United States and India—that employ BoH business models and world-class disruptive technologies to profitably and sustainably meet the critical needs of disadvantaged communities.

Shared Vision

The Business of Humanity® Project would not exist if it had not received its first six-figure plus grant from the University Research Council.

The Beall Family Foundation has been an early supporter and trusted counselor of the BoH Project and has also pledged a permanent commitment to funding our work. Other funders include the Henry L. Hillman Foundation; the United States Department of Education; the Pitt Seed project; and the University of Pittsburgh International Business Center, University Center for International Studies, Katz Graduate School of Business, and Center for Industry Studies at the Swanson School of Engineering.

Funding partners include:



“I have felt privileged to support the BoH work and concept for many years.”

— Donald R. Beall, Chairman Emeritus, Rockwell

Beall Family Foundation

The purchasing power of the “bottom of the pyramid”⁴ has been estimated to range from an amazing \$5 trillion to a truly astounding \$13 trillion. And, the base of the pyramid is mostly to be found in emerging economies in Africa and Asia.

The Business of Humanity® proposition harnesses this purchasing potential by focusing on self-sustaining economic opportunities where safety, quality, diversity and gender equality add further economic value.

BoH Global Demonstration Projects: Our Impact

The DC-HEaRT Initiative

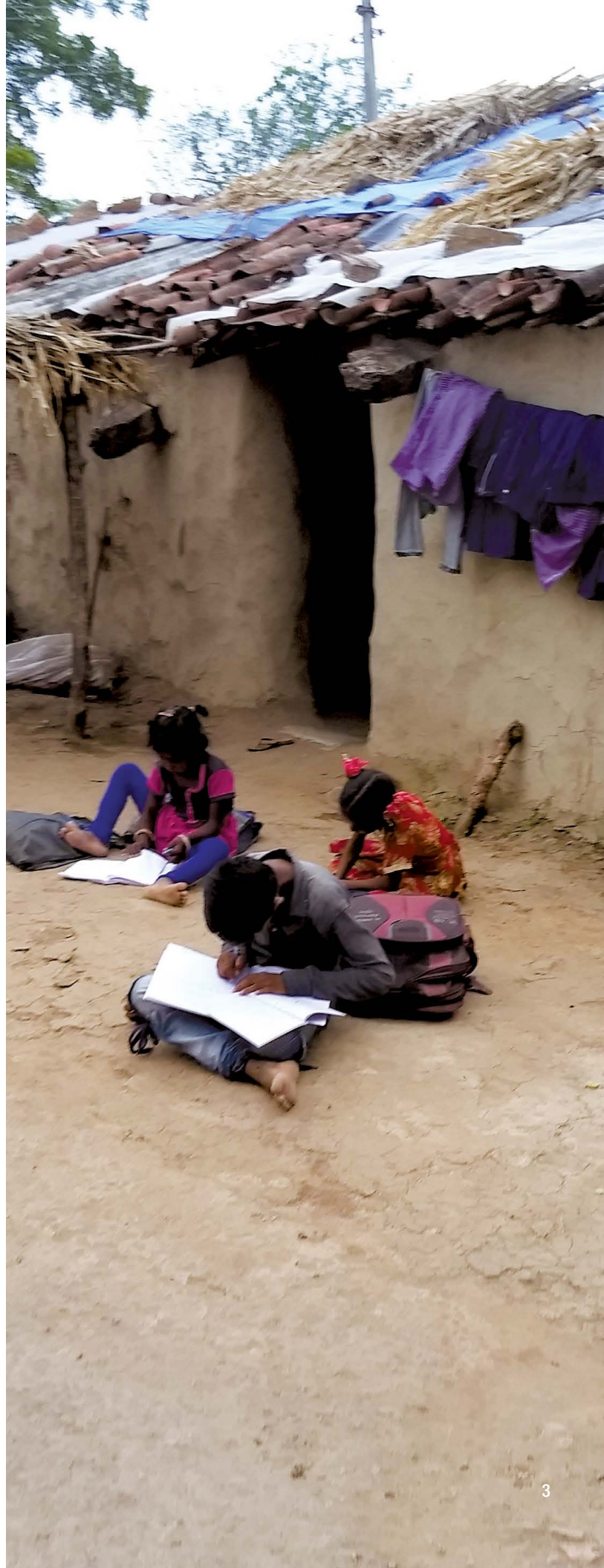


The first demonstration project has been labeled DC-HEaRT (Direct Current for Health, Energy, and Regional Transformation).

The first BoH prototype employing these axioms is well on its way to completion. The **two complementary industries** that are connected are **health and energy**. The **disruptive technologies** employed are **DC (direct current) power and telehealth**, which is the future of medicine, particularly in remote locations. The prototype exchanges innovations between a remote rural community, the village of Tuvar, the State of Gujarat in India, and a relatively low-income community, Homewood, located in Pittsburgh in the United States.

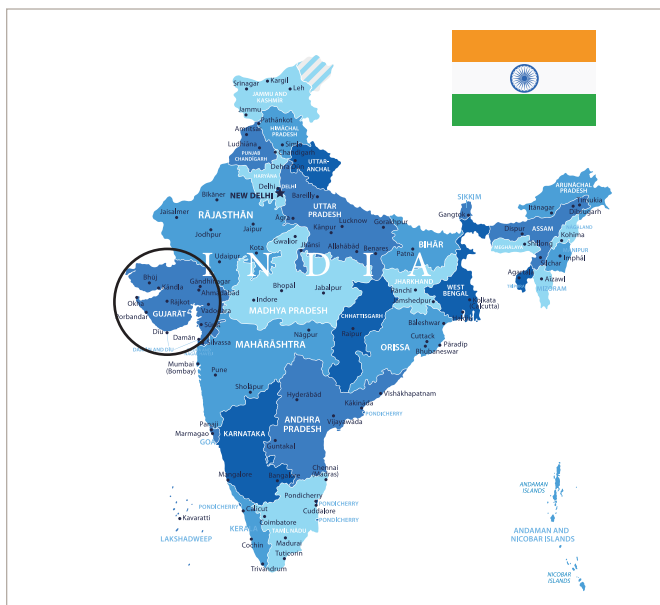
DC power, which is locally generated in both Tuvar and Homewood is resilient, environmentally benevolent, and highly efficient in contrast to the AC (alternating current) power provided by existing electric grids. AC power is largely generated by distant and large stations employing fossil fuels, is extremely vulnerable, and is relatively inefficient.

The DC-HEaRT Initiative was designed in October 2013 at a BoH conference held in Prague, Czech Republic. Executives from major corporations, government representatives from the European Union and the United States, academics and administrators from universities in the European Union, United States and India, NGO and foundation heads, and officers of industry associations attended the conference. The DC-HEaRT Initiative has received extensive and detailed media attention in the U.S. and India, including the *Pittsburgh Post-Gazette's* two-part cover story by Daniel Moore, "World Power: From Pittsburgh to India, Racing to Reinvent the Electric Grid."



Tuvar and Homewood

The two sites, Tuvar in India and the Homewood neighborhood of Pittsburgh, were carefully selected.



Tuvar village, located in a tribal area, with most homes having no electricity, very few toilets, and no running water, was clearly a “base of the pyramid” location. A census and site visits by BoH Project personnel and its partner organizations were conducted, and a broad range of needs was identified. In addition to **employment** and **income**, these needs included **electric power**, **household lighting**, **household ventilation** (to reduce mortality rates—especially among women—due to smoke pollution), **street lighting** and **toilets** (both also helpful for reducing violence against women), **running water**, **health services** and **wellness programs** and **access to government welfare programs**.

Maslow's Hierarchy of Needs



Business of Humanity® strategies focus on the four billion individuals worldwide at the “base of the pyramid,” whose needs lie at the base of Maslow’s Hierarchy of Needs—physiological needs, and safety and security.

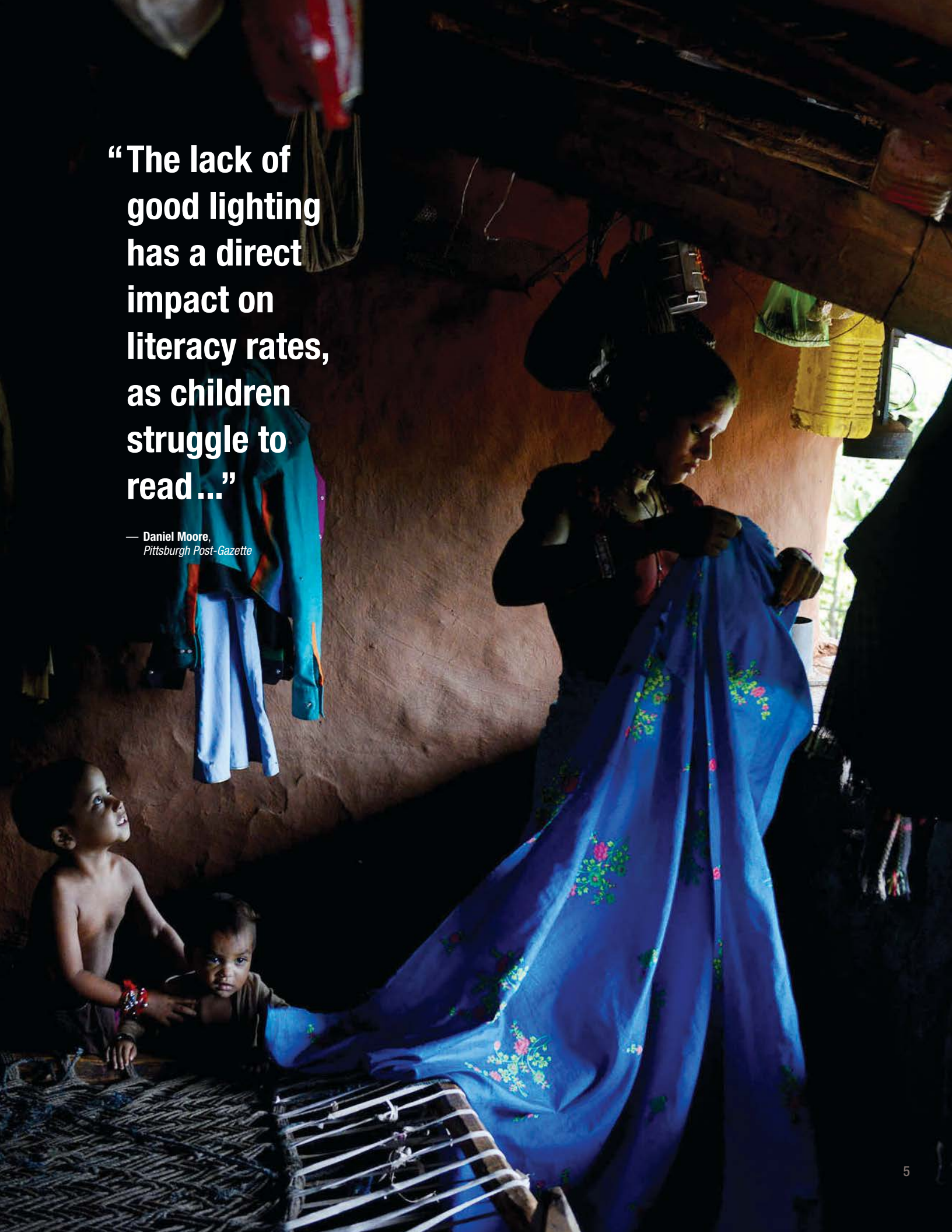
Identifying the most pressing needs of the Homewood community was somewhat complex as most basic needs appeared to be met. A charrette involving faculty from the Pitt schools of business, engineering and social work, community relations administrators from the University of Pittsburgh; members of the local community; and foundations and business representatives was conducted. The two critical needs identified were **nutritious food** because, like most low-income communities, Homewood was a food desert and **lower utility costs** because of Homewood families’ inadequate income levels.

The disruptive technology that was identified as best for building innovative business models suited to the needs of these two communities was green, resilient, highly efficient DC power generated by solar panels. The choice of DC technology and power was made based on a careful triangulation of developments in the technology in India (locally generated power and microgrids), European Union (residential applications and smart city designs), and the United States (high-end applications focusing on the biggest consumers of electric power—computer data centers).

The Tuvar and Homewood initiatives have each been planned to be implemented in three phases. In Tuvar, Phases 1 and 2 have been completed, and Phase 3 is in progress. In Homewood, Phase 1 has been completed and Phase 2 is well underway.

**“The lack of
good lighting
has a direct
impact on
literacy rates,
as children
struggle to
read...”**

— Daniel Moore,
Pittsburgh Post-Gazette



Our Partners in Tugar:

- Narottam Lalbhai Rural Development Fund
- Apollo Hospitals
- Safeworld Rural Services LLP
- Indian Institute of Technology Madras (IITM)

“Electricity is essential to break the vicious circle of poverty and to ensure acceptable basic living standards of populations. It plays a catalytic role in addressing the challenges of job creation, human development, gender equality, security and shared prosperity.”

— World Bank's 2017 *State of Electricity Access Report*



Celebrating the opening of the telemedicine clinic

In Tugar, Phase 1 and Phase 2 included state-of-the-art DC microgrids, street lighting, running water and banks of community toilets with biodigesters. In addition, households were provided with three LED lights, a pedestal fan, charger outlets and computerized meters that educated users about efficient energy use.

A community and wellness center also was constructed to include an examination room with telemedicine equipment; a laboratory; a pharmacy; DC-powered refrigerators and air conditioners; high-speed internet access with computers and printers; a Common Services Center, which connects the local community to government services such as national IDs, health insurance, pension plans and zero-balance bank accounts; and a waiting room that also can double as an education space. With the help of our partners at Apollo Hospitals and Safeworld Rural Services, an administrator was recruited and trained to operate the Common Services Center; maintenance technicians for the DC grids were trained from the local community; and paramedics and wellness and outreach personnel were recruited from the local community and trained in the Indian city of Chennai. We also were able to contract priority access to Apollo Hospitals' network of doctors for teleconsultations.



A home connected to the DC grid



Bank of toilets with solar pump for running water



The first teleconsultation with a patient at the telemedicine clinic

Our Partners in Homewood:

- Professor John Wallace Jr., David E. Epperson Chair, University of Pittsburgh School of Social Work
- Oasis Farm & Fishery
- Thoughtful Balance Architects, Inc.
- SolarCell, LLC
- EIS (Energy Independent Solutions)
- EcoCraft Homes

In Homewood, Phase 1 included a state-of-the-art DC microgrid with solar panels; an outdoor learning space; a custom-engineered, entirely off-grid, bioshelter (with locally generated 48 volt, 24 volt, and 12 volt DC power; 1,700 gallon, filtered and purified, harvested-rainwater cisterns; and an underground wastewater sump); an aquaponics unit growing tilapia fish, greens and microgreens in a closed system; and a system for growing vegetables hydroponically. Operating personnel were recruited and trained, and lesson plans about DC technology and the bioshelter's aquaponics system intended for primary, middle and high school students—were developed.

At the bioshelter, reverse innovation and glocalization are already taking place. An advanced, residential DC microgrid for lowering utility costs in the United States has been designed, built, and tested by the Indian Institute of Technology Madras. Arrangements are being made to ship the system to Homewood. The growing technologies and systems tested in Homewood will be implemented in Tuvur in the final agribusiness phase of the project there.

Charge controllers and batteries in the bioshelter



“The Business of Humanity’s bioshelter has become a tremendous asset for Homewood. In addition to its educational value, the bioshelter is helping to positively shift public perception of the neighborhood and making it a destination. Beyond being an attraction, the bioshelter has become an important part of Homewood’s urban farming ecosystem. Through the bioshelter, Oasis Farm and Fishery is able to provide fresh lettuce, tomatoes, cucumbers and other produce in Homewood through the Everyday Café.”

— John Wallace Jr., Business of Humanity® Project Partner





STEM exploration



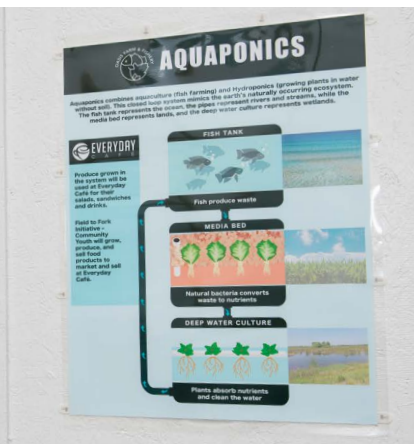
Solar pavilion



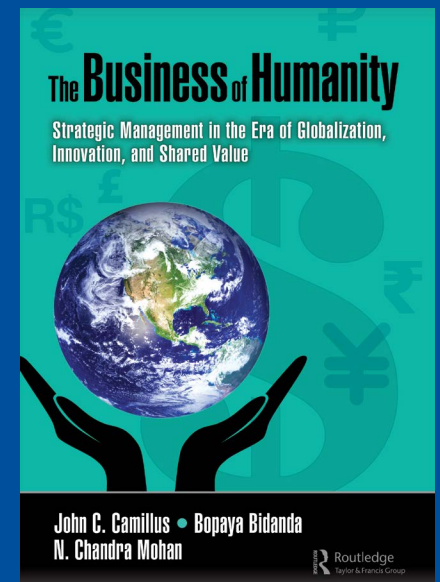
Fresh herbs grown in the bioshelter



Aquaponics equipment at the bioshelter



Hundreds of school-age children have participated in programs associated with the bioshelter in Homewood. Programs offered through the bioshelter also are used to teach STEM topics, including environmental science, alternative energy, and aquaponics. The foods grown at the bioshelter are sold at the Everyday Café, a social enterprise in Homewood dedicated to entrepreneurship, youth development and education. The bioshelter has been visited by foundation representatives, delegations from the Society of Environmental Journalists, university students and faculty, and business and nongovernmental organization delegations from South American and African countries.



“The Business of Humanity® makes the business case for why a more human-centered capitalism is important as a long-term business strategy. This book offers a formula for sustainable economic behavior that could benefit billions of people. Illustrating how our fates are intertwined in ways we can absolutely manage is the genius of this insightful book. Every CEO and politician should read this book.”

— Grant Oliphant, President,
The Heinz Endowments

Vision For The Future

The goal of the BoH Demonstration Project has always been to encourage replications of its prototypes around the globe. Based on existing contacts and requests received, the sites currently being considered are in Botswana, Guatemala, Haiti, and Rwanda. The BoH Project also has been approached by an organization that operates refugee camps across the world.

Before embarking on replications in any of these locations, however, the next DC-HEaRT site will be in Rajasthan, the state adjoining Gujarat. A partnership has been developed with the AACSB-accredited Indian Institute of Management, Udaipur and Seva Mandir, the most significant nonprofit engaged in rural development in Rajasthan.

The Rajasthan site is viewed as necessary in order to frugally engineer and refine a replication of the Tuvur prototype, taking advantage of the human resources, technological competence, and supply chain that

have been developed there, which will be complemented by the capabilities of IIM-U and Seva Mandir. The intent is to reduce cost and to manufacture, containerize, and telelink the elements of the system in order to efficiently and swiftly support replications around the globe. Also, existing business models will be improved and new business models developed by cross-institution, student and faculty teams drawn from the University of Pittsburgh and IIM-U.

In addition, plans for the third, agri-business phase of the Tuvur site are being finalized. Recent developments include a new government-sponsored, bank-financed program to provide 80 percent of the investment in new technology for cooperatives formed by small farmers.

Plans also are in progress for the second and third phases for the Homewood site. Arrangements are being made to ship the residential DC microgrid designed, built, and tested by the Indian Institute of Technology Madras to Homewood. DC appliances, HVAC, and lighting will be installed.

The third phase involves installing a megawatt-scale DC grid in a nearby community center with the intent to also provide low-cost power to adjacent buildings. Technology issues related to linking multiple DC grids and buildings

are already being addressed at the Tuvur site by Safeworld Rural Services, and relevant technology developed by IIT-M will be transferred to the United States. Regulatory issues will be a major challenge in the United States. The strong relationship that the BoH Project has with the City of Pittsburgh has proved helpful in the past, and the expectation is that the government will support the modification of existing regulations that don't take into account the characteristics and benefits of DC technology.

While we have been fortunate in the partnerships we have formed and funders we have gained through our Business of Humanity® projects thus far, we believe that in order to fully realize the potential of our ambitious vision, we will need to form new partnerships and identify additional resources. If you are interested in learning more about how you can assist the Business of Humanity® Project or would like to share ideas for future project sites, please contact Ms. Kristy Bronder, Executive Director of the Business of Humanity® Project at 412-624-4418 or at kbronder@katz.pitt.edu.

Business of Humanity® Principals



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Endnotes

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¹ Camillus, J. C., *Strategic Planning and Management Control: Systems for Survival and Success*. Lexington, MA: Lexington Books, 1986.

² Camillus, J. C., Strategy as a Wicked Problem, *Harvard Business Review*, 86(5): 98-106, May 2008. Also see: Camillus, J. C., *Wicked Strategies: How Companies Conquer Complexity and Confound Competitors*. Toronto, Canada: University of Toronto Press, 2016.

³ Camillus, J. C., Bidanda, B. and Chandra Mohan, N., *The Business of Humanity: Strategic Management in the Era of Globalization, Innovation, and Shared Value*. New York, NY: Routledge, 2017.

⁴ Prahalad, C. K., *The Fortune at the Bottom of the Pyramid: Eradicating Poverty through Profits*. Upper Saddle River, NJ: Wharton School Publishing, 2006.

“Whether it’s in the United States or India, the Business of Humanity® Project is focused on creating innovative, green, and profitable solutions tailored to the specific needs of underserved communities, which have the potential to improve the quality of life now as well as for future generations.”

— **Kristy Bronder**, Executive Director,
Business of Humanity® Project



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