

Harare Exhibit: Proposal

Curator: [REDACTED]

Exhibit title: Harare: The plastic backbone of Zimbabwe

Exhibit location: Chicagoland's Field Museum

My exhibit focuses on the technological adaptations that developed in or near Harare in response to the economic and political crises the country of Zimbabwe faces in the wake of British colonialism. My addition would focus not purely to admire the mutations in efficient technology in Zimbabwe, but to do so in context of the hardships citizens have faced in the past few decades. Zimbabwe continues to be prone to the aftermath of poor infrastructure left after colonial independence, the stagnant political and economic conditions during the process of structural adjustment. Surprising persistence takes root in Zimbabwe with the unexpected rise of a plastic-based economy within the city, as well as surviving the outbreak of the deadly Cholera epidemic, and finally how emerging and evolving technologies and governmental policies can respond to the multiple stated challenges. My exhibit would display both the modern and recent past accomplishments of Harare in response to the local and global needs, with a focus on the scientific and innovative technologies.

This collection, like any museum exhibit, exists to educate the general public; localized in central North America, Chicagoland, my exhibit will be frequented in the largest museum district in the United States in order to maximize exposure of Southern African topics of significance. I chose the North American stage due to my familiarity with its citizen's tendencies as well as its geographic isolation from the entire continent of Africa.

My exhibit is necessary because the most common solution I have come across in my research is that there simply is not enough humanitarian aid going toward Southern African crises. If another pandemic were to occur anywhere in the world, many African countries would be the poorly equipped to handle a sick population spike and are often the most susceptible to excuses of inaccessibility for providing international aid.

Two kill two birds with one stone, I would be educating the least-familiar demographic with the recent history of one such country in hand with the rate of technological potential and economic adaptiveness that Harare has displayed as well as raising overseas awareness from a global superpower in what I predict to be a demographically responsive city. The key to raising interest in my exhibit is to demonstrate that history is not static within the walls of a museum; there is potential to exercise aid and incorporate low-budget innovation into our own economic model.

great!

Consultants

Arthur Mutambara

Mutambara was a deputy prime minister during the signing of the 2008 power sharing agreement between the ZANU-PF and MDC (Movement of Democratic Change). Serving as the president for the MDC, Mutambara would be able to give his first-hand account on sharing political influence over Zimbabwe with President Robert Mugabe.

David Drakakis-Smith

A scholar and geographer that had massive influence on the sustainable urbanization and wrote about the impractical application of structural adjustment to kickstart cities like Harare. Drakakis-Smith would be helpful in analyzing the effects of policy and infrastructure; explaining the cause of the economic problem in the first place.

Tommy Murgatroyd

Inventor of the Zimbabwe bush pump, Murgatroyd would be extremely helpful in explaining the mechanics and necessity for his invention, as well as be a primary voice on the ongoing developments in renewable clean energy. His work may be helpful in adapting to more arid cities like Bulawayo and beyond.

Rene Rabezandrina

Rabezandrina is an established author that has researched biomethanization and other forms of alternative energy. The exhibit would benefit from her presence because she would be able to explain how the implementation of similar technologies could be improved in the context of renewable green energy in Zimbabwe.

Muchapara Musemwa

Musemwa is an educator at Wits University, Johannesburg that has written extensively on the hydro-politics of regions with Zimbabwe. Having Musemwa as a consultant would be helpful in explaining how water because such a fulcrum of power for the government and the effect it had on civilians.

Exhibit Contents

Zimbabwe Bush Pump

The type B Zimbabwe bush water pump was invented in 1933 by Tommy Murgatroyd in Zimbabwe. This pump is excellent at efficiently extracting water for reserves beneath the soil at little cost to construct, operate, and maintain. Pumps are more effective at conserving water than wells, because the natural resources do not need to be transported, are difficult to jeopardize, and will not evaporate with no exposure to the Sun. Furthermore, the bush pump continues to see action today, providing otherwise clean water to thousands of civilians

The bush pump has gone through many adjustments and incarnations as the technology spread like a bushfire from settlement to settlement. The pump was present during the spread of the Cholera epidemic. Cholera is a water-borne disease that plagued the regions of Zimbabwe in 2008, and technologies similar to the bush pump were integral in providing non-contaminated drinking water and preventing lost lives. The key strength of this innovative technology is the effectiveness of completing its task paired with the affordability to a community that can benefit greatly from a Zimbabwe bush pump in their immediate lives.

de Laet, Marianne, and Annemarie Mol. "The Zimbabwe Bush Pump: Mechanics of a Fluid Technology". *Social Studies of Science* 30.2 (2000): 225–263. Web...

Textiles of Harare

Local-made textile clothing was widespread in much of Zimbabwe, predominantly worn by the women of Harare over the men. Clothing has always been a form of Southern African culture with more significance places on the quality and style of the fabric, as they were once more prominent indicators of social class. Generally, the more threads you could count in a fabric, along with the richness of color, would define the clothing that defined those who wore it. Wearing outside of your social boundaries would amount to simple execution in some regions of Southern Africa. This behavior has gone out of style in more recent years, in favor of modern clothing with popular global culture.

The economy of Zimbabwe was monitored using textiles as a sample point from the year 1990 to 1998. An economic model [included] depicts the unique stability that came about in light of the removal of a British colonial system, and shortly following, the destabilization that occurs under the new government. Since clothing is so widespread, monitoring the ways it has interacted with the citizens of Harare is considered a technological step, the advancement of which information holds value in determining the impact of any general product on the infrastructure of the city and country as a whole.

Carmody, Padraig. "Neoclassical Practice and the Collapse of Industry in Zimbabwe: The Cases of Textiles, Clothing, and Footwear". *Economic Geography* 74.4 (1998): 319–343. Web...

Biogas Chambers

Biogas technology, also known as biomethanization, is a form of renewable energy that is easily manageable and uses clean-technology. Biogas technology operates by housing organic waste with methane producing worms within the composite. The fermentation of these gases can be fed into a gas engine, that can provide heat and electricity to homes and institutional buildings by recycling energy in human waste and harnessing a natural biological cycle to a greener, more affordable end.

The implementation since 1990 has seen moderate acceptance in the communities of Harare. Those who are utilizing the power of biomethanization have seen an overall decrease in home energy bills with minimal maintenance work. What has been preventing the complete acceptance of the technology is the fact that it is more expensive to set up, and time that could be spent saving money is often less favored than time making money. Still, there is room for improvement and acceptance of alternative energy that is very important to Harare and serves as a basis for modern renewable technology to begin advanced development.

René Rabezandrina. "Biogas: Evolution of Actions and Prospects for the Rural Environment in Africa". *Ambio* 19.8 (1990): 424–426. Web...

Plastic Bottles

Plastic bottle collection and recycling at plastic plants are one way the impoverished citizens of Harare are trying to pull themselves up by their bootstraps and make something resembling a living. A plastic bottle may not be much more than trash after it's been emptied, but a theme of Zimbabwe is her ability to produce environmentally and economically friendly solutions out of necessity.

Tomson Chikowero [photo] started as a plastic hunter in 2010 after losing his former employment as a builder. When he began collecting, he was so embarrassed that he would leave before the morning sunlight and return after it had set again, to avoid recognition. Now, Tomson is known by his community and he understands that his role goes beyond just his own financial security, but the health of his city as well.

Kwenda, Stanley. "Trash Collectors Become Zimbabwe's Unlikely Climate Change Ambassadors." *Trash Collectors Become Zimbabwe's Unlikely Climate Change Ambassadors*. Web. 16 Nov. 2015.

<<http://www.ipsnews.net/2012/08/trash-collectors-become-zimbabwes-unlikely-climate-change-ambassadors/>>.

GMOs of Zimbabwe

In the past four decades, the agriculture of Zimbabwe has been on the move. The country produces and exports soya, maize, cotton, tobacco, millets, and cowpeas as some examples of the most produced crop. However, the arid climate of the region often withers away some of the yield before it can be harvested. Many climate factors like rainfall, humidity, and pests can impact agricultural life and therefore daily life.

Dr. Samuel Muchena began developing crops that could resist more intense droughts and that required less fertilizer and rainfall, specifically known as the AC31 and AC71 maize crop variants. These gmos have proven effective in regions like the SADC, where food security depends on harsh conditions. In the climate regions of Zimbabwe, gmo crops are less of a debate and more of a necessity.

Climate Change Research

A study by climate change researcher, Dr. Desmond Manatsa, has shown that the rise in air temperatures in Southern Africa could be related to the loss of the upper Antarctic ozone in the South Pole. The study suggests that a shift in the southern hemisphere resulting from the ozone hole correlates to the lower pressure systems that Southern Africa began experiencing.

This study is key in raising climate change awareness not only for the inhabitants of Southern African countries but the inhabitants of planet Earth on a global scale. The research ties nicely into other exhibit pieces, focusing on developing alternative energies and green waste management.

The Scientific Industrial & Research Development Center

This piece focuses on the education and paths for further development on a continental scale. The national center for scientific research has over eleven areas of scientific study that are available to those who wish to pursue technology, biotech, business ops, food and production, communication, etc. This aligns with the interests of the government of Zimbabwe, which has been prioritizing the education of coming generations of scientists and opening universities of technology within Harare.

The national center has produced solutions such as basic educational kits including laboratory equipment as well as products that aim to industrialize Africa, such as roofing tiles and tools. All signs point to progress, and the developing technologies go hand in hand with the recovering economies and communities of Africa.

This is a great proposal. Visuals
would have been nice.

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