

Overview

Our focus is a strategic initiative that simultaneously addresses environmental, economic, and social problems, on a local and international level, with a self-sustaining and evolving impact.

Our goal is to accelerate the development of an open source economy by making vital economic information as widely available as possible. We are a network of engineers, farmers, fabricators, developers, and supporters engaged in creating the **Global Village Construction Set (GVCS)**, a platform of 50 key industrial/agricultural machines responsible for high living standards in many parts of the world. By rethinking the designs of fundamental technology, and training individuals and communities to both build the tools themselves and establish economic enterprises based on it, we can rapidly generate a host of solutions across the planet.

Outcomes

Relocalized Industry - regional goods production free from dependence on carbon-intensive distribution systems.

Resource-Based Wealth - economic enterprises dependent on how well local resources are managed - industry reintegrated into local ecosystems.

Best Practices - the free distribution of information and global/inter-generational dialog about the most adaptive/advantageous ways to accomplish economic objectives and meet material needs.

Enduring Solutions to Poverty - open collaboration drives key technology costs so low that they are widely adopted providing regional abundance and opportunity for widespread self-reliance.

GVCS - Key Features

Open Source - we freely publish our 3D designs, schematics, instructional videos, budgets, and product manuals on our open source wiki, and we harness open collaboration with technical contributors.

Low-Cost - The cost of making or buying our machines is on average 8 times cheaper than buying from an industrial manufacturer.

Modular - Motors, parts, assemblies, and power units can interchange, where units can be grouped together to diversify the functionality that is achievable from a small set of units.

User-Serviceable - Design-for-disassembly allows the user to take apart, maintain, and fix tools readily without the need to rely on expensive repairmen.

DIY - The user gains control of designing, producing, and modifying the GVCS tool set.

Closed Loop Manufacturing - Metal is an essential component of advanced civilization, and our platform allows for recycling metal into virgin feedstock for producing further GVCS technologies - thereby allowing for cradle-to-cradle manufacturing cycles.

High Performance - Performance standards must match or exceed those of industrial counterparts for the GVCS to be viable.

Flexible Fabrication - It has been demonstrated that the flexible use of generalized machinery in appropriate-scale production is a viable alternative to centralized production.

Distributive Economics - We encourage the replication of enterprises that derive from the GVCS platform as a route to truly free enterprise - along the ideals of Jeffersonian democracy.

Industrial Efficiency - In order to provide a viable choice for a resilient lifestyle, the GVCS platform matches or exceeds productivity standards of industrial counterparts.

Open Source Economy - magnetizing a network of human skills and energy and focusing it on addressing ecological and economic problems with tangible benefits for all participants leads to an accelerated rate of growth for a parallel sustainable economy.

Progress

- As of January 2012, we have completed full beta releases of four GVCS machines: *tractor*, *compressed earth brick press*, *soil pulverizer*, and *hydraulic power unit*.

- We are nearing completion of a 3,000 sf fabrication and training facility ([FabLab](#)) and 10-person living units ([HabLab](#)) using our beta-released equipment (compressed earth brick construction) to host our [OSE Fellows](#).

- We have prototypes of the *microtractor*, *ironworker*, *dimensional saw mill*, *drill press*, and *CNC torch table*.

Sustainable Development

Renewable energy is one way of reducing carbon emissions. Large renewable energy projects are important, because they have a sizeable impact and drive down the costs of technology. But, it is also important to invest in decentralized energy technology, because of its potential to transform society.

We create open source alternatives to expensive and unnecessarily stagnant technology. Where there is interest, open source technology goes through a rapid process of iterative development. At the intersection of poverty and the threat of climate change, it is possible to magnetize the interest and energy of a global network of collaborators unified in the common vision of a life of abundance beyond the shadow of crisis.

When we hit our target, the technology will spread rapidly multiplying the social return on the investment made by our financial partners. We are striving to develop a basket of open source renewable energy designs improving on the achievements of currently existing technol-

- [OSE Europe](#) was founded in 2011, and we are seeing independent replications of GVCS machinery happening in *Texas*, *Maryland*, *Oklahoma*, and *Britain*. The refinements made are confirming our expectation that open source development is an evolutionary process, with each successive generation improving on the design of the last.



LifeTrac
(tractor prototype)

Affordable Renewables

- **Solar Concentrators**
- **Wind Turbines**
- **Biomass Pelletizers**
- **Gasifier/Burner**
- **Syngas/Pyrolysis Machine**

ogy. This includes designs for a solar concentrator, wind turbine, biomass pelletizer, gasifier/burner, and syngas/pyrolysis machine (also good for making biochar). Our goal is to lower the costs of building this equipment using readily available tools and materials, and, when that target is hit, we expect that we will see its rapid adoption, which will have an exponential impact on carbon emissions.

Track Record

Kickstarter - on October 9th, we initiated a campaign to raise \$50,000 on Kickstarter.com. We made a promise to deliver four full product releases by December 25th as the *OSE Christmas Gift to the World*. By November 20th, we raised \$63,573 with 1,384 donations, and on Christmas Day we delivered on our promise.



Founder - OSE was founded by Dr. Marcin Jakubowski, a Princeton graduate with a PhD in Physics from the University of Wisconsin. He is a 2011 TED Fellow, and his TED Talk was rated the 6th best of 2011.

OSE Christmas Gift to the World - on December 25th we released full beta releases of the *tractor*, *compressed earth brick press*, *soil pulverizer*, and *hydraulic power unit*. Each machine was released with the following documentation to facilitate independent replication anywhere in the world:

- [Design Rationale](#)
- [Assembly Video](#)
- [Fabrication Manual](#)
- [Bill of Materials](#)
- [Fabrication Drawings](#)
- [Master CAD Files](#)
- [User Manual](#)

(See [Appendix](#) for examples)

Global Collaboration - we draw on talent from across the planet, utilizing a 24/7 development cycle, with participants ranging from Mechanical Engineers and Permaculturalists to Senior TED Fellows. We host an online forum and a community-developed wiki with 3,200+ pages of content, and our YouTube channel has over 700 video updates tracking our progress.

GVCS Development Budget - Jan. 2012 - Jan. 2013

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Designing	536,068
Prototyping	1,029,190
Field Testing	200,978
Documentation	414,581
(50 machines)	
Total	\$2,184,669

Revenue to Date:

- 'True Fans' - 520 supporters \$10/mo.
- Ewing Marion Kauffman Foundation - \$100k
- Anonymous Grants - \$60k/\$43k
- Kickstarter.com - \$63,573
- (to be announced) - \$360k

Current Grant Requests:

- Draper Richards Kaplan Foundation
- Ashoka Fellowship
- Echoing Green Fellowship
- Ford Foundation
- Surdna Foundation

LifeTrac

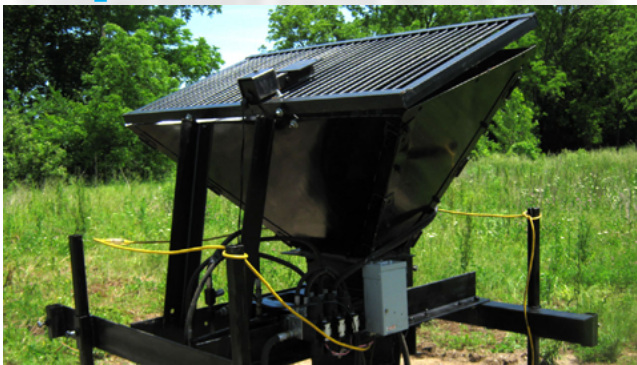


Documentation:

([links](#))

1. Design Rationale
2. Assembly Video
3. Fabrication Manual
4. Bill of Materials
5. Fabrication Drawings
6. Master CAD Files
7. User Manual

Compressed Earth Brick Press



Documentation:

([links](#))

1. Design Rationale
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Soil Pulverizer



Documentation:

([links](#))

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Power Cube



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