First Name:	Marcin
Last Name:	Jakubowski, PhD
Email:	OpenSourceEcology@gmail.com
City:	Maysville
Street:	PO Box 442
Country of Residence:	United States of America
State/Province:	Missouri
Zip/Postal Code:	64469
Address Type:	PO Box
Website:	http://opensourceecology.org/
Primary Country of Social Impact:	United States
Secondary Country of Social Impact:	Multiple Nations
Field of Work:	Economic Development
Target Population:	Business Entrepreneurs/Communities/Farmers/Indigenous Populations/Landowners/Underserved Communities/

Outline the nominee's core idea, and how it differs from existing practices in the field (please reference any similar efforts of which you are aware).

We are a network of farmers, engineers, and supporters engaged in creating the Global Village Construction Set (GVCS), a low-cost, high-performance, open-source, do-it-yourself platform that allows for the easy fabrication of the 50 industrial machines that it takes to build a small civilization with modern comforts. The GVCS includes machinery, equipment, tools, components, and other infrastructures for creating a complete economy: food, fuel, energy, building materials, transportation, and fabrication.

The core idea of Open Source Ecology (OSE) is to develop distributive enterprises. Distributive enterprises are designed according to the standards of the open source platform. Where enterprises are developed openly, best practices for developing infrastructure and manufacturing processes can be improved upon and used by anyone. Our goal is distributive economics: developing tools for open source, productive enterprises with a focus on training producers. We are interested in developing a new economic engine: the community-based solution of re-localized production.

In conjunction with the development of distance-learning opportunities for communities globally, we are also developing training facilities, where people can receive practical experience building and using the equipment. Trainees can then return to their respective regions to implement the distributed-enterprise model and train others. Further, our educational outreach will include sending teachers to train people in other areas of the world,

using open-source curriculum, where communities are interested in adopting these practices. There are other successful organizations developing open hardware, but nothing else exists at this scale and with this intention.

By developing open source industrial machinery that is low cost and easy to manufacture, and by training people to fabricate and use the equipment themselves, we are directly addressing the root causes of poverty in a way that will have a lasting global impact.

What is the main social problem this idea is attempting to solve? Please provide a brief quantitative and qualitative analysis of the context.

Manufacturing sector employment has significantly declined in developed nations since the late 1970's[1], while trade deficits have hit historic highs in the last five years[2]. Chronic unemployment is a result of this shift in global job distribution, which will lead toward an evening out of international living standards, but at a level much lower than countries like the United States have previously achieved. To redefine the future according to a more optimistic and desirable vision, there is much that can be done by people with small sums of capital besides depending on government assistance or more successful companies within the private sector.

Furthermore, commercial machinery is often prohibitively expensive to purchase and maintain, which creates a barrier to entry for people without the financial means to develop their own enterprises. We believe that the energy that our commercial competitors spend on protectionism, which limits their ability to collaborate openly, is both a waste and a liability. We, on the other hand, are free to contribute all of our energy to creative development. Protectionism, policing, excessive structuring, and bureaucracy are forms of waste that we tend to avoid based on our zero-waste policy of promoting post-scarcity economics.

What is the impact of the work to date? Please provide qualitative and quantitative data.

By this year's end, we will deliver the OSE Christmas Gift to the World: (1) product releases of the Tractor, Compressed Earth Brick Press, Soil Pulverizer, and Hydraulic Power Unit, having completed three prototypes for all these machines; (2) thorough documentation of these four tools to make replication a straightforward reality; and (3) extensive field testing of this equipment to demonstrate efficient, high-performance construction techniques with these tools within the context of building our training facility infrastructure. Please refer to Marcin Jakuboski's TED Talk[3] and the Open Source Ecology website to view videos of our production and testing of these machines.

We currently have over 400 True Fan's, which are people who contribute $10/month, and this is a sample of the level of support. We also recently waged a successful Kickstarter campaign for $63,573 with over 593 backers, and Dr. Jakubowski was invited to be a 2011 TED Fellow. These numbers demonstrate a broad base of growing public support.

[1] 'Employment, Hours, and Earnings', Bureau of Labor Statistics. (1979: 19.3m/2011: 11.7m) http://data.bls.gov/pdq/SurveyOutputServlet
[2] http://www.bea.gov/index.htm
[3] http://www.ted.com/talks/marcin_jakubowski.html

What are the main spread strategies moving forward? (Please consider geographic spread, policy reform, independent replication/adoption of the idea and other). What is the desired impact of the idea within 5 to 10 years?

Independent replications of our machines are currently underway in Baltimore, Austin, and Dallas[4]. Replications are made possible through our extensive library of documentation. For each machine, we include the following: (1) design rationale; (2) 3D CAD files; (3) 2D fabrication drawings; (4) CAE analyses; (5) CAM files (where applicable); (6) exploded parts diagrams; (7) bills of materials and sourcing information; (8) scaling calculations; (9) A-Z instructionals; and (10) cost and performance comparisons to industry standards. All documentation is openly available on our website, along with high-quality video tutorials showing how to fabricate the machinery. The website also includes a community-developed wiki, online forum, and blog.

The replication of the GVCS can take place anywhere in the world with our assistance. We are currently finishing a 5,000 square foot training facility, which is a place for people to come learn how to fabricate and use the machinery. We are also developing open source curriculum for teacher trainers to take with them as they visit other communities to help them develop their own local industries.

As we move into the finalization of the GVCS near yea r's end 2012, we will transition into the next phase of our program, which is to develop a 200 person community that uses the equipment to develop an autonomous local economy at a modern standard of living. As this process is worked out, we will document it as well and use it as a model for others to look to for the development of their own village enterprises, whether they are in the first world or the third world.

Why is the nominee personally dedicated to the issue? Please share relevant background on the person, including: her or his history of entrepreneurship (including childhood years) and the life experiences and/or insights that led to the current path. In your view, does this person have the skill and desire to realize the vision at a large scale?

Dr. Marcin Jakubowski is a Polish-born American citizen with a BA in Chemistry from Princeton University and a PhD in Physics from the University of Wisconsin. He is a 2011 TED Fellow and the founder of Open Source Ecology (2003), where he has been involved in the design, prototyping, field-testing, and documenting of the Global Village Construction Set as well as organizational development and public outreach.

His resume can be seen here: http://opensourceecology.org/w/images/8/88/Resume_-_Marcin_Jakubowski.pdf

Are there online resources we should reference to learn more about the nominee?

http://opensourceecology.org/wiki/OSE_Founder

http://opensourceecology.org/wiki/Crash_course_on_OSE

[4] http://opensourceecology.org/wiki/Replication

Did the nominee start an institution as the main vehicle for the idea?

Yes. The organization is named *Open Source Ecology*.