

COLLABORATION PROPOSAL:

INGENIO SANTA ANA (ISA) – OPEN SOURCE ECOLOGY (OSE)

The following brief aims to outline the motivations and methods through which Ingenio Santa Ana (CAISA) intends to foster the dissemination of Open Source Ecology (OSE) technologies, mainly selected machines in the Global Village Construction Set (GVCS), in the Republic of Guatemala. ISA is committed to this project primarily through the conviction that the GVCS could have profoundly positive effects in Guatemalan communities that often lack means of production, and access to technology to improve productivity . We also share the view that post-scarcity can be achieved through local and intelligent technology and design that empowers people.

CAISA's optimism in the GVCS is combined with a wealth of resources that are very well-suited to assist in the dissemination of GVCS technologies, which we are proposing to make available to those ends. CAISA's interest in this project lies purely in the benefit of society, so we make these resources available for free. While the Do-It-Yourself (DIY) nature of OSE allows us to attempt replication on our own – given the scale of our proposed endeavor, we do expect to work closely with OSE staff on an on-going basis. Some suggested features of this relationship are mentioned below – after we describe what we bring to the table.

ISA Offers:

To help disseminate elements of the GVCS in Guatemala, through a combination of replication, advocacy and training – and by making three strategic assets available:

- 1) **Scrap Metal:** Every year, we produce tons of scrap metal and steel in the form of varying beams, bars, joints, cogs, nuts, bolts, screws, etc . All of these cover a large part of the necessary components to build GVCS machines – and we will acquire all remaining parts, as necessary as we build GVCS machines. We have all necessary tools. The GVCS machines that get built at CAISA will be distributed in the best way possible, as an intelligent public-service, to selected rural communities throughout Guatemala. We want to identify the best way to transfer this technology and we want it to foster cooperation, division of labor and productivity. Taking into account cultural issues we want to avoid the possibility that bringing in this new element into the communities can produce conflicts that were not previously present.
- 2) **Highly-Skilled Labor Force:** CAISA is a large-scale sugar mill that operates a lot of large-scale industrial machinery in a highly-demanding technical environment. Our operations require the efforts of several high-level engineers and hundreds of highly-skilled plant mechanics – all of whom are extremely proficient in the skills necessary to build, modify, maintain and repair machinery of any size. A selected group amongst them, based on skills and interests, will serve as the GVCS “task force” and will be the main force behind

the initial replication, capacity building, technology transfer and labor force training. They will ensure that our first efforts at replication fulfill the highest standard as well as train other replicators within the organization. An important number of these skilled mechanics are also operators of agri-machines during the crop year, so they know the areas where machines fail and how and where to strengthen them. Our team is very adept at making modifications to suit terrain conditions as well as the needs and purpose of the machine. Very importantly for OSE, CAISA staff will be able to make valuable, technical and practical design recommendations, as necessary, and in general, as we replicate and test different machines and prototype versions.

- 3) Target Initial Communities: Every year, during harvest season, we employ thousands of people to harvest the sugar cane – and they come from dozens of communities nationwide. At CAISA, we have close ties with all those communities not only through our labor-force, but through our active engagement in employee outreach programs. As such, all these communities form the ideal target group for the introduction of new technology that in the developing world always requires follow-up and long-term engagement. Many of the skilled mechanics that form part of the replicator group will also disseminate the skills within their own village. Very importantly, from the very beginning, these communities will be instrumental in machine testing. Since we wish to disseminate the GVCS in our rural communities, it is extremely important that we get their feedback, which we will do even from our first replication (see below), in order to ensure they utilize them in the best possible way to increase the productivity and sense of community in their villages.

These three principal assets will allow us to fabricate several GVCS machines over the next 2 years. We estimate, we will be able to build at least 10 machines per year, and as we become more proficient we will be able to build more and more diverse machines, which is our main effort. We expect our training and tech transfer efforts to result in additional machines getting built outside our own direct efforts. In addition to the actual implementation of GVCS in Guatemalan communities (our main goal), we also hope to make substantial contributions to GVCS product testing, evolution and general knowledge base.

Quite importantly, we also intend to motivate other sugar mills in our industry to do the same. We expect once our program gets under way, it will be easy to motivate other sugar mills to join the effort, which would greatly multiply the scale of this program. We dare not speculate about others' resources at the moment and cannot give specifics – but know that it could be a few multiples of what we alone can provide.

CAISA Expects:

With the aim of maximizing the value of our efforts, we hope to have a close working relationship with OSE staff – something we believe to be beneficial to both parties. The idea is to maximize

collaborative value while minimizing waste/drag. A few notable points in our perception of what a close working relationship means:

- 1) Flexibility and open-ness to have technical service calls, if ever becomes necessary for our team to solve questions and resolve/improve certain issues as we advance in our replication. CAISA engineers and mechanics will invest time and resources in developing and documenting machines being built and we have set the goal of having the first LifeTrac built by October 1, 2012.
- 2) Mutual marketing will be useful to both parties as we hope to further enhance our dissemination of the GVCS. This includes presence for CAISA on OSE websites, especially as our scale grows; the permission to use your logo as we lobby others to join the effort; and in general, an openness to create joint marketing strategies to recruit more resources.
- 3) An openness to host an CAISA team member at Factor eFarm at some point within the next year, when deemed appropriate for both parties, for a high-quality hands-on time – for replication/prototyping/construction/other. This would be not so much for “training” but for collaboration and team-building/sharing. We would cover their expenses.

Schedule:

- September 2012 – The team at ISA will complete the first replication of the latest LifeTrac prototype.
- October 2012 – Technical testing, review, document suggestions of the 1st LifeTrac.
- November 2012 – Extensive field testing in one or couple of the communities, finish documentation.
- December 2012 – Replicate 2nd LifeTrac, with built-in improvements from the 1st build.
- Jan-Apr 2013 - After testing the 2nd LifeTrac, we will build the 3rd LifeTrac with the aim to make it good enough to actually implement and donate to a community, which we will call Effective Prototypes. By the end of April, we hope to have implemented 3 Effective Prototypes of the LifeTrac in different communities. Even though design will continue to improve, Effective Prototypes will get implemented in the field.
- May-Sept 2013 – We will replicate our first CEB Press, test and build and test the 2nd prototype. From then on, we hope to implement 3 Effective Prototypes of the CEB Press and 2 more LifeTrac’s

Though we intend to make this an ongoing effort, we consider this first year an appropriate time at which to re-calibrate our projections and the scope of our program – which could be larger than these conservatives.