PROJECT DAEDALUS

EDUCATION AND TECHNOLOGY FOR REFUGEE CAMPS IN GREECE

We are going to:

- **Help camp dwellers to create their own technical support groups**, by providing them with tools, materials, expertise and rudimentary guidance.
- **Support them in building their own basic infrastructure**, rather then waiting for anyone else to deliver it[1].
- **Develop and implement „Internet classrooms" infrastructure**[2], available both in-camp and for the surrounding community, to boost education and communication.
- **Create and implement legal, technical and economic framework** for emerging microenterprises and self-employment[3].

All this activity is the way towards re-empowerment of people in the camps. The essential goal is to help them get organised and educated and to make their integration easier and quicker.

We will establish a mobile support team (up to 3 people with the car and essential equipment), working with local volunteers and camp dwellers in several (up to 5) places throughout Greece, sharing ideas, running workshops and providing contact with global community of solidarity economy and open technology[4]. We will also maintain a „Base-camp Lab" for prototyping and heavy equipment.

The initial timeframe is the 2016. After internal audit and evaluation, next year will be planned accordingly. However, people in the camps will not be left alone – part of deliverables is to provide them with their own social network of contacts and support even if the project would not be continued.

While the project aims to become a self-funding social cooperative, it will not be achieved in 2016. We need seed funding to make it go before it can become sustainable.

We will run the project as a core team of 3 full-time contributors[5], coordinating work of local groups, remote supporters and allies as well as doing front-line job on the ground.

1 More at https://daedalus.libtech.website/category/level_1/
2 More at https://daedalus.libtech.website/category/level_2/
3 More at https://daedalus.libtech.website/category/level_3/ (soon)
4 We plan to invite hackerspaces, makerlabs and other technology-oriented groups (both in Greece and abroad) to participate, on the ground and remotely.
5 Starting from one full-time and two part-time positions, eventually growing full-scale. Current bio: see

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INTRODUCTION

After closure of borders between Greece and the rest of Europe, **over 50 000 refugees got stuck in the country, with very limited means and hardly anything constructive to do.** Theoretially, they should be „processed" in a timely manner and either be deported to Turkey or granted asylum in Greece (and subsequently „resettled" to other EU countries). Meanwhile they are literally in a limbo of sorts, concentrated in underfunded camps, with barely adequate support, hugely dependent on volunteer support.

Precarious situation, lack of information and communication, **boredom**[6] and disintegrated social relationships not only hamper integration with new environment. They are also begging for troubles.

People need to be in control of their life. People need to have constructive things to do. People need to learn and to develop as they see fit.

EMPOWERING PEOPLE

What we want to do is to give people at least rudimentary influence on their living standard; basic access to education of their choice and a way to become sustainable in economic sense. It will not heal their deep emotional wounds. It will not make it much easier to face new, unfriendly society they have to live in. But **all empowerment starts from practical things**. Technical skills and knowledge are hardly prone to ideological bias. Nail and hammer is **always** nail and hammer. And

6 All these problems are widely reported in many camps, see https://libtech.website/?get_group_doc=21/1461660103-Greece-mainland-camps.pdf

this – *nomen omen* – is the way to build new life in new realm.

It is all about empowering people. Everything else is just a tool.

THREE LEVELS OF SELF-SUPPORT

FORMING LOCAL TECHNICAL GROUPS AND BUILDING BASIC INFRASTRUCTURE

We start very close to earth. Camp by camp we will be looking for people with simple technical skills: gardening, woodworking, construction, DIY. We will be talking to them, learning local problems that can be solved with simple technology: **solar cookers and water heaters, public space lighting, drainage, waste management, gardens, public spaces.**

This is the teambuilding phase. People will start exchanging skills, getting in touch with Greek and European reality, doing simple but useful things. Regaining control on their own lives begins from this point. At the same time we will be gathering further support: financial, in kind and through networking.

It is not just a warm-up. „Level 1" includes solutions to some most immediate needs, regularly reported by people in camps: individual family cooking devices, hot water systems, children playground equipment. More to come, as we survey specific locations and their dwellers. Every need will find a solution and solutions will be published for the common good.

CREATING INFRASTRUCTURE FOR EDUCATION

Education, for children and for adults, is a key need on the next level, just beyond bare survival. There is never enough teachers, books and other resources, especially for language learning. Typical e-learning needs decent Internet connection, which is another serious problem for the camps. We are developing „Internet Classroom[7]" design, using offline resources and free content broadcast fron the satellite network. Even if there is very poor or no internet connection, at least basic e-learning will be available for camp dwellers.

SELF-EMPLOYMENT AND MICRO-ENTERPRISES

During the pilot phase we will elaborate and implement the concept of social cooperative, intended as a legal framework for all refugees who wish to start working in the realm of solidarity economy. The cooperative will also operate as an incubator of sorts, helping create individual businesses and new co-ops.

This is probably the best chance for newcomers to go ahead with the integration, without getting into competition on the shrinking labor market.

7 https://daedalus.libtech.website/2016/05/22/simsim-box/

TAKING CARE OF LOCAL COMMUNITIES

During the whole refugee „crisis", but especially since 2015, **Greek society set the highest possible standards of humanitarian attitude.** Crushed by unprecedented financial disaster, stigmatised and smeared by all mainstream powers in Europe, the Greeks at large accepted and supported over million of refugees, literally walking North through the country, via „The Balkan Road" and eventually towards rich countries of Europe.

Now, when the borders are closed, the burden grows – and the Greece's own situation worsens as well. That is why we want to make sure that as much as possible – without compromising the chief goal – we will support local Greek communities, whenever we work. **Buying goods and services locally, making every resource available also to the locals, working towards integration „here and now" – we consider it absolutely necessary.**

BEYOND SINGLE PROJECT

The problems we will be dealing with are here to stay. And perhaps to grow, as the situation – globally and in Europe – gets more difficult. We expect Project Daedalus to grow. And we want its „deliverables" to last. **People** – educated, empowered and organised. **Technical solutions** – sustainable, carbon neutral or negative, published as free knowledge. **Solidarity cooperatives** – providing sustenance and equity-based environment for their members. We aim for a snowball effect – people replicating the project throughout Greece and beyond, thus creating continental network of solidarity and support. But instead of self-sacrifice, which is a part of volunteering, it will be vibrant and innovative, sustainable and resilient environment of social economy.

NEXT STEPS

- **Preparation**
  May is planned as a preparation month. We will put together basic documents (more detailed operational budget, equipment specification, online content etc.), online and offline, fix the basic funding, select first few locations and simply start going ahead with basic projects. First response from camp communities will show us the way ahead.
- **Operation**
  As soon as we have first local team established, we enter operation phase. Having (hopefully) funds flowing, we will be improving our infrastructure (mobile unit and base-camp lab) to be able to support more camps and develop more sophisticated constructions. The more local groups we have, the bigger will also be „contribution to the upstream" – support from the camp residents to the project as a whole.
- **Evaluation & Transition**
  In the beginning of October we will start a process of evaluation. Presumably, 4 months of operation will be enough to learn how (and if) we should plan next stage. Following the

basic decision (go ahead or close the project), we will then implement it during December. If we decide to go ahead, we will start planning in at least 12 months' cycles.

Appendix 1. People involved

More biographical information can be found here:
https://daedalus.libtech.website/category/knowledge/people/

Bob Bollen

Retired IT manager who, on realising that democracy is slipping away, decided to do something about it. And now also deeply concerned about the mass migrations into Europe, and our inadequate and unjust responses to them.

My career has progressed through hardware development, software engineering and into project management, accompanied by a growth in inter-personal and business skills. In my project management role, I've worked in a variety of organisations including government departments, IBM, Logica, Vodafone and Reuters. Responsibilities have included quality management, rollout of a new IT service to support UK Crown Courts and construction of a mobile phone test lab. I've also had periods working as a teacher and in sales.

In my current voluntary work, the focus is in helping people and groups to understand the whole picture surrounding a topic; and then to agree just and sustainable ways forward. A key to this process is in ensuring that all have the opportunity to both tell their stories and express their needs and desires. My ambition is to find ways of achieving a seamless connection between the immediacy and passion of face to face conversation with the reach and asynchronicity of the internet.

Recent roles include

- Partner at Talk Shop[8]
- Associate at Compass[9]
- Organiser at Barnet Participates[10]
- Team Member at Democracy 2015[11]

On meeting Petros Polonos, I was impressed by his capabilities and his vision to offer low-tech

8 http://www.talkshopuk.org/
9 http://compassonline.org.uk/
10 https://www.youtube.com/watch?v=C4x6VdJkocs
11 see this article in The Independent: http://www.independent.co.uk/voices/comment/the-values-of-democracy-15-will-come-from-our-supporters-are-these-a-good-starting-point-8224296.html

solutions which will improve the quality of life in a way that empowers people. Although based in the UK I want to support this vision.

Kaya Erbil

I am a chemist turned artist and activist. I am a Berkeley educated chemistry Ph.D. who is moving into the area of working on developing appropriate technology for communities that are subjected to socio-economic oppression.

The goal is to use simple and effective designs to empower people to live better lives. Currently, I am working with Native Americans on Pine Ridge, the Lakota reservation in South Dakota. I am working with a Native owned and run solar energy company. We are currently working on building a compressed earth block (CEB) house that showcases many of the technologies that the company has developed.

The CEB house is made of locally derived resources, earth from the reservation. The blocks are naturally thermally insulating, keeping the house cool in the summer and warm in the winter. Eventually, a solar air heater and photovoltaic panels will be installed into the house to power the home and keep it warm, while preserving the house off the grid.

A side project while in Pine Ridge is a solar computer. I hope to learn about blockchain encryption software for building microgrids. In addition, it is an immediate interest of mine to involve local youth in technology education.

Petros Polonos

I witnessed several impossible things in my life, beginning from the 1st Solidarity period in Poland. Was a stock broker, IT consultant, e-commerce entrepreneur and courier driver.

Now I am using all my knowledge and experience to support freedom and empowerment of various communities. Part researcher, part writer, part (anarcho)industrialist, I follow the path marked by Peter Kropotkin and Murray Bookchin, showing how technology can support and amplify social and political development.

Since November 2014 I live in Greece, near Thessaloniki, writing about current developments and having a tiniest share in popular effort to support refugees in transit (and now in residency).

My work here includes workshops, lectures, research and development. I do not provide wage labour. I am funded solely by private donations. I am not affiliated with any organisation of any kind.

If we develop Project Daedalus with success, I hope next stage will let us expand beyond Greece and reach other communities, not only refugee camps and settlements. I have some 20-30 active years ahead of me and my hope is to spend them contributing to humanity, any way it may be needed.

Appendix 2. Essential needs itemised[12]

BaseCamp Lab

The facility 30 km East of Thessaloniki, Greece. Provides hospitality and safe storage for the whole project, up to 5 people simultaneously. Contains also workspace for prototyping and delivery address. Curently the base-camp is settled in a flat, privately rented by Petros, near Thessaloniki. As the need arises it will probably move to separate place nearby.

Hospitality and living infrastructure upgrades

- bigger LPG tank for cooking,
- more tableware,
- guest sleeping bags, towels etc.
- mosquito nets,
- simple washing mashine.

Machinery and technical equipment

- drill press,
- dremel multitool,
- table saw,
- electronic prototyping lab kit,
- bits and blades for all tools,
- a selection of hand tools (inspired by http://thevillagewoodworker.blogspot.com/2012/04/beginning-woodworking-basic-woodworking.html).

Mobile Technical Unit

A vehicle, equipped as moving operations base, providing independent power, connectivity and tools for a crew of 3. Will be used as support for local groups, presentation and education facility. The vehicle is an Opel Vectra wagon (combi), in bad need of refurbishment, however able to carry up to 3 people and 500 kG cargo – tools and materials.

Solar power module

- photovoltaic panel 3*100 W,
- MPPT controller 40 A,
- UPS battery 100 Ah (to be expanded up to 400 Ah),
- 600W inverter,
- cables, connectors, rigging.

12 A budget document is available separately.

Mobile Internet node

- USB mobile modem,
- mobile router,
- micro-server,
- antennas, rigging, accessories,
- USB disk 500 G SSD,
- USB WiFi Adapter,
- 12 v to 5 V power converter (1 per device),
- powered Ethernet hub,
- powered USB hub,
- case, cables, connectors, cooling fan.

Audio / Video documentation and presentation kit

- tablet,
- 17" hdmi monitor,
- hdmi computer projector
- soundsystem / external sound card,
- camcorder / adventure camera,
- point-and shoot digital camera,
- digital voice recorder
- tripods, selfie sticks, cabling, projection screen.

Essential tools

- battery-powered tools combo (http://thevillagewoodworker.blogspot.com/2012/04/beginning-woodworking-basic-woodworking.html),
- electric circular saw,
- impact drill,
- angle grinder,
- woodworking set inspired by http://thevillagewoodworker.blogspot.com/2012/04/beginning-woodworking-basic-woodworking.html
- a selection of glueing, painting and general purpose tools.

Local Tech Groups

Self-organised groups, strictly resident-based, working to get camp residents involved in self-support and mutual help. We assume that every group will count 3-5 people of various skills. One of the tasks for the pilot project is to develop and document optimal toolset for such unit, which will then be standarised for better cost efficiency.

First candidate group is *Jafra Refugees-2-Refugees*[13], formed in Lagkadikia camp by ex-members of *Jafra Foundation* NGO in Syria[14].

Solar Power Module & Local Internet combo

- Photovoltaic panel 100 W,

13 https://www.facebook.com/Jafra-Team-in-Greece-Refugees-to-Refugees--فريق-جفرا-في-مخيمات-اليونان-493799984138526/

14 http://jafrafoundation.org

- MPPT controller 10 A,
- UPS battery 26 Ah,
- cables, connectors, rigging.
- USB mobile modem,
- mobile router,
- micro-server,
- antennas, rigging, accessories,
- USB disk 500 G SSD,
- USB WiFiAdapter,
- 12 v to 5 V power converter (one per USB device),
- powered Ethernet hub,
- powered USB hub,
- case, cables, connectors, cooling fan.

Audio & Video kit (education and entertainment)

- computer projector hdmi,
- soundsystem / external sound card.

Basic tools

- battery-powered tools combo (http://www.amazon.de/gp/registry/wishlist/HK5RQJORN5TW/),
- electric circular saw,
- impact drill,
- angle grinder,
- woodworking toolset, inspired by http://thevillagewoodworker.blogspot.com/2012/04/beginning-woodworking-basic-woodworking.html,
- selection of general purpose tools.