



## PROJECT EARTHSHIP ECOHOSTEL

**Project team**

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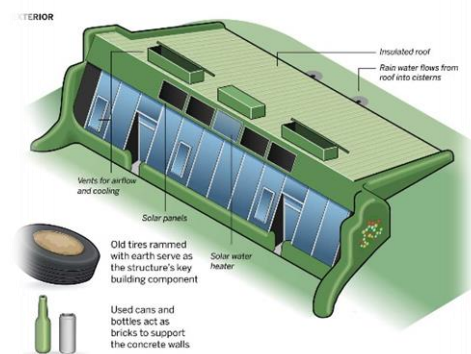
Dominika Lachowicz

Marko Saje

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**BETTER LIVING THROUGH GARBAGE**  
Earthships are self-sustaining homes constructed from as much locally-sourced, reclaimed material as possible.



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## 2 PRESENTATION OF THE PROJECT

### 2.1 Background

At the outset of the outlining of the project, we spotted the importance of entrepreneurial initiatives for the development of self-sustainable and environment friendly ecological housing - what we came to name as the Earthship EcoHostel. Given the situation of planet Earth, facing an imperative, and burning problem of climate change spawned the usage of not sustainable energy resources, as well as due to a prevalence of a non-organic lifestyle by people all over the world. Regarding this situation, we found the idea and philosophy of fully sustainable and ecological solar houses ideal - we believe that their construction and promotion of sustainable way of living and travelling - as well as educating in this field - will slowly lead to improvement and increasing of knowledge of people in this field.

Keeping in mind the quote of the former Indian leader Jawarharlal Nehru, that "failure only comes when we forget our ideals, objectives and principles", we have set into stone a clear set of values and priorities of the erection of this daring project both on the vision level: to keep true to the Earthship philosophy of having fully self-sufficient and fully sustainable, in terms of food, energy and water supply, as well as a wellspring of health and education means, a place of inspiration of a lifestyle enshrined in the values of community work and interdependence of members, as well as inspiring a lifestyle that is in tune and flowing of within nature, in detriment of one which side-lines it, as well as creating a harbor that can both serve the needs of a permanent community, as well as being able to sporadic visitors, in the modality of eco-tourism, being able to effect change on the mind-set of the tourist, without straying from its values. - a vision for the creation of a catalyst in awareness raising and direct impact in the Western lifestyle.

### 2.2 Objectives

The main **goal** of this project is **to build and maintain the Earthship EcoHostel (Global Model) as an experimental environment-friendly project for people interested in alternative ways of living, who seek to experience different kind of travelling and community living in the pure nature** - self-sustainable, ecological, peaceful and for voluntary contribution.

Our mission is as follows:

- to build ecological housing Earthship EcoHostel Global Model based on Bioteecture standards
- to open a self-sustainable and environment friendly Earthship EcoHostel what will be maintained by volunteers interested in earthship philosophy and alongside with principles of community living
- to provide special experience for people interested in alternative ways of living, who seek to experience different kind of travelling and community living in the pure nature
- to provide cheap and affordable accommodation for travelers from all over the world
- to support tourism in Slovenia and promote Slovenian nature
- to support sustainable and ecological life-style and education of travelers

### **2.3 The content and the scope of the project**

This chapter is primarily concerned with defining who and what is included in the project.

The main executive body of the project is the project team composed of team members: Martim Ventosa, Pavla Kolářová, Alessia Dado, Marko Saje, Garam Gu and Dominika Lachowicz.

For defining and completing the project scope was necessary to identify stakeholders and document their needs to meet the specified objectives. Below we identified stakeholders according to their relevance and described their needs which were turn to project requirements afterwards:

- project team - most essential element, given it operates as the face of the project.
  - 1. to complete the project - within all the cornerstone parameters.
  - 2. to assure the maintenance of clean, audited and balanced financial records.
  - 3. to assure the proper maintenance of the original philosophy of the Earthship within our project, all throughout.
- sponsors and Slovenian government, as well as the crowdfunding community - of second order importance, given the team carries the responsibility to invest properly the invested funds - as well as deliver an appealing Return on Investment.
  - 1. to deliver, if possible, a better than expected Return on Investment, as the while maintaining financial salubrity in our ledger.

- hostel staff - of third importance, given that we must ensure staff morale and zeal for the maintenance.
  - 1. to uphold their original expectations, all the while sustaining for their desire for alternative and ecological lifestyle within the community.
  - 2. to have a very attractive set of continued parameters of incentives for maintaining not just the hostel but even the whole community.
- customers – travelers - of last, however just as valid importance, given we must ensure the cyclical attraction towards the eco hostel
  - 1. to prove, with the elevation of this project, the whole underlying ideal of the Earthship - all the while sustaining a regular healthy influx of paying visitors, year-round.

### **What and where? (product and its location)**

We have set forth a plan to, to put into practice above discussed ideas, implement the project of the construction of an earthship in the form of a housing project to harbor domestic and foreign travelers within the Slovenian wilderness. The idea is to create an ecohostel set abreast a year-round a community, living and working within the philosophy of the Earthship, what we were inspired by.

This concept of ecological, self-sustainable type of passive solar house that is made of both natural and upcycled materials (tires, clay, cans, etc.), was created by American architect Michael Reynolds. The Earthship houses are intended to be "off-the-grid-ready" homes that don't rely on public utilities and fossil fuels. They are constructed to use available natural resources, especially energy from the sun and rain water<sup>1</sup> (for illustration see Figure 1-1).

How do earthships work? These buildings, made from natural and recycled materials, address all the five principles of human needs: it provides thermal/solar heating and cooling, takes care of solar and wind electricity, it's capable self-contained sewage treatment and water harvesting and long-term storage. One of its last advantages is also some internal food production capability. All above mentioned characteristics make the Earthships (together with its modification for all the climates) suitable and desired eco-solution for ecological, sustainable and healthy lifestyle<sup>2</sup>. There are different models of earthships designed by Biotope

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<sup>1</sup> <https://www.earthshipglobal.com/about-us/>

<sup>2</sup> <https://www.earthshipglobal.com/design-principles/>

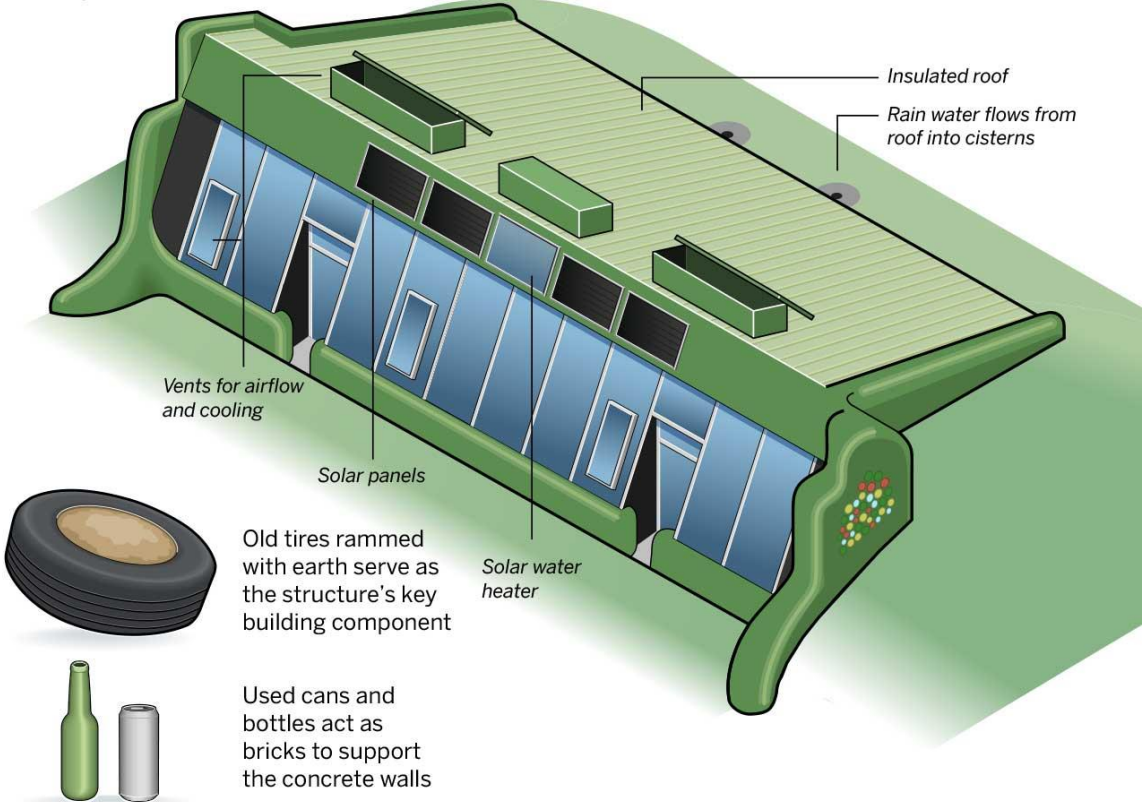
company, for purpose of this project and building and natural conditions in Slovenia The Global Model Earthship was chosen as a most suitable possibility. Models of earthships and costs of buildings are available online<sup>3</sup>.

The Earthship Eco-Hostel is specific type of construction what needs also specific location - for all the conditions for the most efficient usage of all the available energy sources, it has to be positioned at the best case on the southern slope in the hilly area, where all the necessary conditions for building of earthships will be met. The location of the house will be discussed with the expert architect and the topographer.

**BETTER LIVING THROUGH GARBAGE**

Earthships are self-sustaining homes constructed from as much locally-sourced, reclaimed material as possible.

**EXTERIOR**



Additionally, concrete and wood are used extensively

BRICE HALL / POSTMEDIA NEWS  
SOURCES: EARTHSHIP BIOTECTURE

**Figure 1-1**

<sup>3</sup> <http://earthship.com/a-look-at-the-models-of-earthships>

## **2.4 Assumptions**

We assume that the biggest problem of our project is to get all the needed resources in planned time. If we do not manage to we can prolong that part. We can also start our project even if we do not get all the money in planned time. We can provide the rest of the needed resources also when the project is already running. In comparison with other similar buildings around the world our project is a bit expensive. But we think that is good because we still have places where we can reduce the need of money if needed.

We assume that we get all the state permissions before we start the project. We do not want to deal with the permissions in the middle of our project, because that can stop our project on some point. Before we will hire entrepreneurs the contract with them will be signed. With contracts we will make sure they obliged themselves to finish what they promised.

We assume that time plan is realistic. We also compared our time plan with other similar buildings that are already standing and fully functioning, and we have similar assumptions for duration of the project that they had. Our key project member and others we are fully focused only on our project. On that point we reached a decision that idea of our project is realistic and feasible.

## **2.5 Limitations**

One of the major limitations is the fact that our kind of Ecohostel needs a specific location where it should be built because of the heating and cooling needs. Another limitation is the fact that the duration of building process might be longer in comparison with building the classical house.

The Earthship Ecohostel cannot be built in the winter time - this we see as a main litmus test - a fact that can also be limitation.

Limitation of the project is also its independency from national water supply - Our Ecohostel will contain all the water needed for its use, if the natural water in the area where the Ecohostel will be located gets contaminated, the Ecohostel will reach to a problem.

In that contingency case, the Ecohostel will be forced to use national water supply. There also might be some other limitations but those are the major limitations of Earthship EcoHostel.

## **2.6 The risk**

EcoHostel project has many risks that can lead to a total project failure: to avoid project failure we tried to recognize as many risks as possible that may affect our project.

In our risk plan, all the risks are divided in 4 main groups - According to a risk we also wrote the responses to every possible risk.

Nevertheless, in general, we will try to avoid the risks that were already recognized. Every step in building the Ecohostel will be thoughtful in advance to act risk prevention. Some of the risks that we will have to deal with are as follows: lack of money, lack of volunteers, finding an expert architect in building Earthships.

## **3 TOOLS**

### **3.1 The applied project methodology**

For realization of this project, we have chosen the methodology and global standards of Project Management Institute (PMI)<sup>4</sup> which gave us background and basis to start and conduct our project.

We built a project team of six members, group of individuals with diverse backgrounds but with the common sense of purpose. For more efficient work, we decided to set separate roles in the team, which are:

- Project Manager held by Martim Ventosa,
- Project Plan Manager held by Alessia Dado,
- Project Content Manager held by Pavla Kolářová,
- Project Quality Manager held by Dominika Lachowicz,
- Project Risk Manager held by Marko Saje,
- Project Office Manager held by Garam Gu.

At the beginning we have discussed the topic of interest and identified external stakeholders and companies. In order to define the project scope and content, we documented the needs and requirements of our target group and other stakeholders. From these findings, we have determined the main goal of our work set as following: to build and maintain the Earthship EcoHostel (Global Model) as an experimental environment-friendly project for people

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<sup>4</sup> A guide to the project management body of knowledge (PMBOK guide). 4th ed. Newtown Square, Pa.: Project Management Institute, c2008. ISBN 9781933890517.



interested in alternative ways of living, who seek to experience different kind of travelling and community living in the pure nature.

Along with this goal, we have specified the objectives of project (described in Chapter 1.2).

Following the given goal and objectives, set in the order to fulfil the needs of stakeholders, we have created the project time plan containing 4 steps: preparation, execution, finalization and evaluation. We have subordinated project activities and components to each of them. During the preparation phase, we have created a draft of Project Definition Document (PDD).

In line with the PDD and Project Plan, we have set the WBS - project's deadlines, estimated time and costs and decided who will be responsible for which activity. It was crucial for preparation and execution of project to define WBSs so we can structure the work and progress.

### **3.2 Computer tools**

We made a use of Gantt to create charts - we have our common document of Google Drive which each of us is editing and see the progress of our work.

### **3.3 Support (Skype, groupwork, tools)**

As a team we are meeting weekly, and working in shared area, known as a war room – where we gather all the vital information in one place and brainstorm. At each meeting The Project Manager ask the rest of the team three questions: *What did you do since the last meeting? What are you doing until the next meeting? What prevented you from doing work?* Besides the necessary questions, we are discussing also problems and trying to find the solution. We have Skype meetings every Saturday, discussing all the necessary issues.

## **4 PROJECT ORGANIZATION**

### **4.1 Organizational structure of the project**

As already outlined before in this vision document, we have built a skeleton project team brought together by a sense of shared goals and common purpose: that of creating a landmark in the process of the adaptation of humankind to more earth friendly, and authentically holistic lifestyles – a team that seeks to unleash, with the creation of this purported Earthship eco-hostel, a revolution in making mainstream the until now unconventional.

As to be below elaborated, the project commission has decided that the organizational structure hierarchy that shall be implemented for the delivery of the project will be a projectized one: whereby the entire operational structure will be organized by projects, and each project manager and office will be in control of the projects. Individuals or employees are assigned to projects and report into a project officer and manager superior to him. Once the task of an employee is over, they will be assigned to another assignment and or by their respective superior office. Communication will primarily take place within channels of the same project.

We have chosen this modality considering that teams can have a strong sense of identity – It is the easiest structure within which to create a dedicated team culture. The whole team, we predict, will be focused on the team's goals, so conflict of loyalty exists with the day job for the people working on the project. Their day job is the project and the full breadth of the operative teams' activities. Resources are dedicated to the project, so it's much easier to schedule work. It'll be expedient to know when the team members are available and there's no risk that they'll be pulled off at short notice to business-as-usual work for another manager. Projects run in this structure are great environments for honing the individual operative's project management skills as well as more technical leadership skills.

### **4.2 Responsibilities of project members**

On the more operational level, on the first tier, we have set as the initial milestone the proper assignment of both planning and execution goals for each of our team members, having appointed Garam Gu as project office manager, trusted with the tasks of leading the planning and oversight of the rigorous financial flows of the project, having been trusted with the final 'power of the purse' - keeping the ship afloat, and sailing to yearned land.

Next, we appointed Marko Saje as project risk manager, trusting him with the task of abstract thought of all possible arising risks on the onset, planning, execution and finalization of our

project - encumbered with the role of keeping a reality check all throughout the project on all fellow team mates.

On the following page, we appointed Dominika Lachowicz with function of project quality manager, entrusting her with the important double-edged task of chief compliance officer, guaranteeing that our entire project is legal abiding within the jurisdiction of the Republic of Slovenia, as well as guaranteeing that all throughout the project the project all the best practices and material quality is kept in check.

We ensued with the appointment of Pavla Kolářová as project content, trusting her to all throughout the project oversee if all the small machinations of the project delineation and unfolding, in its 'big picture' aerial snapshot is keeping faithfully with the original idea set into stone - essentially keeping a check if everything follows the original 'vision stuff'.

On the following scale of nominations, our fellow team mate Alessia Dado was culled as project plan manager, enshrined with the duty of keeping the strategic sense of cost benefit of the project, sense of strategic importance of paths within crossroads to follow, and general role of strategic orientation of the team.

At last, but not least, Martim Ventosa was culled as project manager, tasked with discharging a duty of assessment of the checks and balances of the team dynamic and project unfolding, propping a general sense of ethical principles and good credo, all throughout the process - to serve the team on their ambition to assemble this daring reality altering project.

On the second tier of the project, as we like to call the 'boots on the ground' level, we have set the priority of the appointment of some key figures of trust to help turn the project from paper to stone.

One figure, immediately of second greatest importance to the first tier, is the appointment of a site foreman, who will accompany all the construction, since the laying of the first stone, all until, for quality guarantee purposes, the end of the evaluation stage - a foreman who will be the mediator between the leadership board of the project and investment stakeholders, to the operation on the ground, all done in strict accountability with the Planning manager, giving assurances that the project is done in strict consonance with the agreed upon spirit and vision for the project.

Another figure of significant importance to the project is the incumbency of an architect, who will be responsible with the adaptation of an Earthship blueprint with a topographical report of

an agreed upon location, all the way until the Finalization phase, assuring, in strict accountability to the content manager that all ends of the project are held together in symphony.

A third figure of significant importance of appointment is that of a compliancy lawyer, whom will be entrusted with the obtaining of building permissions and fully legally notarized and binding contracts, all done in strict accountability to the project quality manager, to assure at all stages of the project, everything is done in full legal compliancy with Slovenian law.

A fourth slot to be filled is the need for the partnering with a media savvy company to publicize, with greater emphasis on the later stages of construction leading up to the grand opening, to create speculation and elicit excitement with the project - setting the ground for a successful grand opening, this corporation would operate on the mandate and with strict accountability with the content manager, vouching that the vision portrayed on every and every spot is loyal to the original vision and philosophy.

The fifth important slot to be filled properly is that of both the working construction paid and voluntary staff and the future hostel paid and voluntary staff, which would operate under the project office / which would mainly be responsible with flow of payments and staff career progression affairs.

The sixth role to be filled are by the electricity installation, clay plastering, paintings and last touches team, that will ensure a grand opening of excellence and of a fully presentable finished project - thoroughly prepared for its start of life cycle. This office is purported to be fully accountable to the quality control office, to whom the it shall be issued the green light of finished project, to be delivered to the project manager to declare the end of the execution phase.

### **4.3 Project supervision and reporting**

One key conclusion our team reached an unanimously is that only by rating clearly the start & end objectives prior to starting on a plan or risk leaving the door open for the project leadership to project managers and participants to make assumptions – having formulated an agenda plan for the construction of the eco-hostel that from the beginning is mindful of possible risks, and assures cover enough for the quality of the project – having documented and justified in an annex timeline a sensible plan – embodied by a preparation, execution, finalization and evaluation periods, all accounted by local overseers and the foreman figure, through an auditing process.

One second important idea for the supervision our team reached was of the building in of contingencies to allow for changes that may be required as the project moves forward – having set within the timeline and payroll a plan that is flexible enough and resilient to probable gaps, and having agreed to concede to the ‘on the ground’ structure, such as the foreman, architects and lawyers to operate with autonomy and prerogative. This applies also by the instruction of the project office manager to operate on a flexible estimate budget, one that offers enough coverage, yet a

A third priority the team set the agenda for is the establishment of a communication chain mechanism, that we feel as required for when changes occur so that all stakeholders know in a uniform and fully accountable, and financially audited manner – making resource for the former such platforms as Basecamp, and for the latter, the auditing, such platforms as Optical SmartStart.

We unequivocally reached the conclusion that it is imperative that we ought to create a solid plan of action to save time and money on staff and resources- whereby alongside the clearly projectized hierarchy to look up to, everyone has clear guidance, managers and employees feel valued and don’t end up frustrated to the point of quitting. This is scheduled to take place at the detailed description of the building of the hostel, shaped to take place afterwards the crafting of the final Project Definition Document.

Alongside the previous point, we see the value in going further, and to pursue a clarification of the objectives of the project and define specific roles of your project team. Thereby, each member will be impelled, we predict, to be accountable for his deadline, budget and scope of responsibility. By clearly defining the roles of team members – we can avoid falling into the trap of running with assumptions and falling into accountability, auditing and legal problematics.

## **5 STRUCTURE OF THE PROJECT**

### **5.1 Structural diagram products**

#### 5.1.1 Description of products

The final product of this project will be ecological housing Earthship EcoHostel (Global Model) based on Biotope Earthship standards<sup>5</sup>, located in Slovenian wild nature in the most suitable place, chosen by the experts. The house will consist from administrative room and reception, 15 double rooms for guests, technical room with storage, 3 shared bathrooms and facilities, one shared kitchen and common room, front-wall greenhouse and other technologies necessary for the construction and existence of the Earthship (exemplary model of house and rooms - see *Figures 4-1,4-2,4-3,4-4*).

The EcoHostel will be maintained by group of volunteers (with one leading expert familiarized with the earthship concept), who will be responsible for reservations and welcoming guests, technical and administrative maintenance of the building and the area around (garden). The place will be open the full year for travelers and visitors - they will be welcomed to join the community living in the house and to help with the maintenance of the whole place in exchange for free or voluntary-sponsored accommodation.

The idea behind the whole project is to create community, where the people will be welcomed to join and help, live together and share. By sharing we mean not just material goods, but also sharing of knowledge and skills in sustainable and ecological housing, lifestyle and all the connected topics, what we find important.

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<sup>5</sup> <https://www.earthshipglobal.com/>



**Figure 4-1 House from outside**



**Figure 4-2 Corridor connecting the rooms**



**Figure 4-3 Kitchen and shared space**



**Figure 4-4 Double bedroom<sup>6</sup>**

<sup>6</sup> Illustration photos available from: <https://www.earthshipglobal.com/earthship-images>

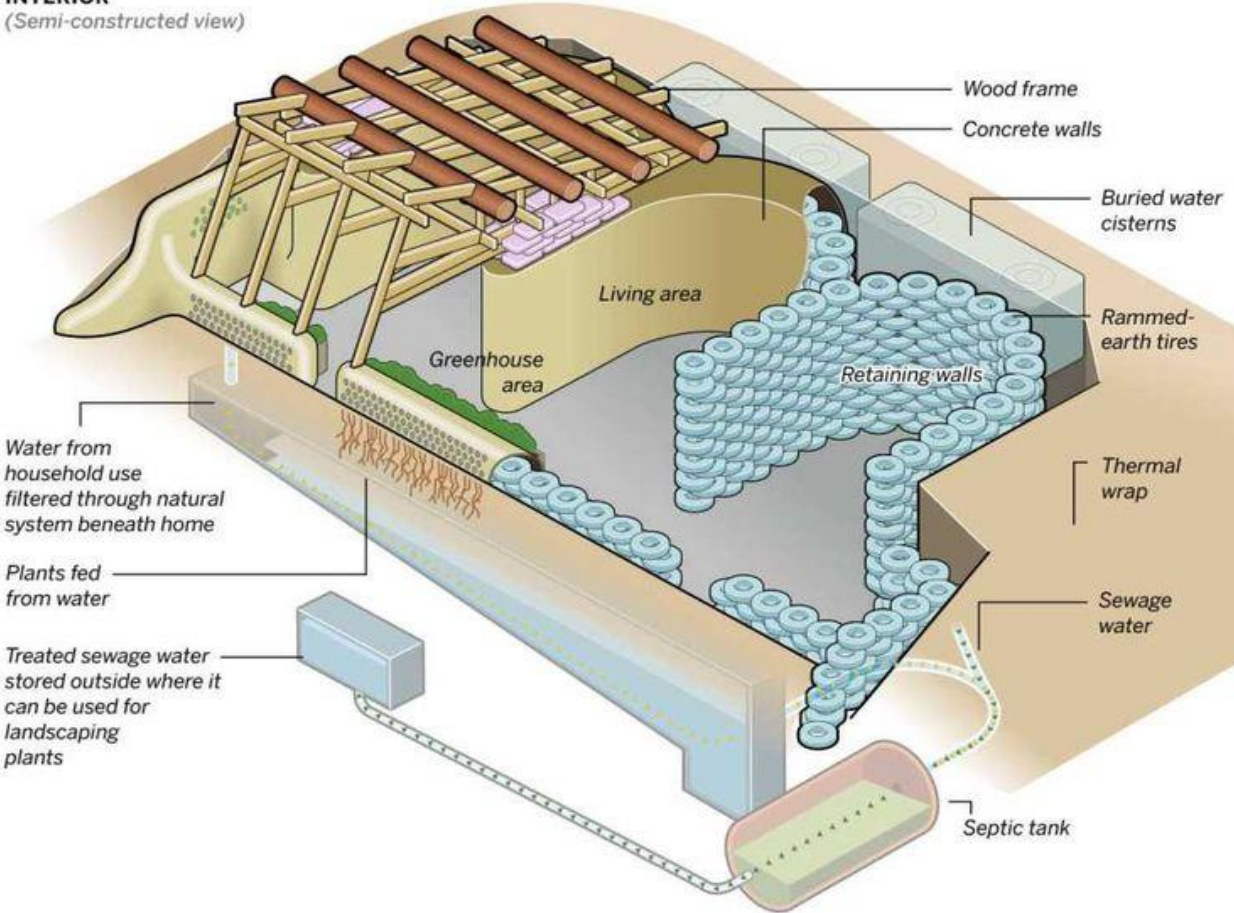


5.1.2 Network diagram of products

**BETTER LIVING THROUGH GARBAGE**

Earthships are self-sustaining homes constructed from as much locally-sourced, reclaimed material as possible.

**INTERIOR**  
(Semi-constructed view)



BRICE HALL / POSTMEDIA NEWS  
SOURCES: EARTHSHIP BIOTECHTURE

Figure 4-5

## 5.2 Time plan

### 5.2.1 Project time plan

(for illustration see **Figures 4-6, 4-7**)

#### PREPARATION

- **Activity:** creating draft of Project Definition Document (PDD) + defining the team member roles and stakeholders + project deadlines
  - **Responsible:** Project manager
  - **Time estimated:** one month
- **Activity:** detailed description of the building (hostel)
  - **Responsible:** Project content manager
  - **Time estimated:** one week
- **Activity:** finding and signing contracts for an expert architect and a topographer
  - **Responsible:** PM, plan, office, content
  - **Time estimated:** one month
  - **Cost:** 6000

*Duties of the architect:*

- consulting the vision
- planning interior and exterior of the building (furniture, equipment, products, materials, etc.)
- selection of place for the hostel
- **Activity:** getting the building plans (blueprints) for the Earthship building by “*Global Model Earthship*”
  - **Responsible:** hired topographer and expert architect
  - **Time estimated:** one week
  - **Cost:** 1000 euro
- **Activity:** get the financial resources
  - **Responsible:** Project office + Project plan
  - **Time estimated:** three months

*Financial resources:*

- crowdfunding
- sponsors
- government support
- **Activity:** finding volunteers for participation on the project
  - **Responsible:** Project office + Project plan + Project content -
  - **Time estimated:** two weeks
- **Activity:** financial plan
  - **Responsible:** Project office + Project plan
  - **Time estimated:** two weeks
- **Activity:** hire a lawyer: signing a contract

- **Responsible:** Project office + Project plan + Project content
- **Time estimated:** 1 month
- **Cost:** 2000 euro p/month

*The lawyer will manage:*

- building permission
- contracts
- **Activity:** risk manager will set the risks
  - **Responsible:** Risk manager
  - **Time estimated:** one week
- **Activity:** finding a project foreman for the building and construction (will be present at the place whole time) + 15 workers
  - **Responsible:** Project office & PC
  - **Time estimated:** two weeks
- **Activity:** finding experts (electricity, clay plastering, paintings, final touches + hydroizolation)
  - **Responsible:** Project office & PC
  - **Time estimated:** two weeks
- **Activity:** find the hostel staff
  - **Responsible:** Project content / Project office
  - **Time estimated:** two weeks

*Method:*

- open call
- **Activity:** planning the promotion
  - **Responsible:** project manager & project office & project content
  - **Time estimated:** one month (continuously with above)
  - **Cost:** 2000 euro for media expert

*Sub-activities:*

- hiring of promotion company
- spreading info around social websites (interested FB groups - travelers, eco-living, alternative websites,)
- video (e.g. construction phase - teaser)
- special offers

## **EXECUTION**

- **Activity:** building process
  - **Responsible:** foreman, 15 workers (168750 / 10 euro p/month), architect, experts
  - **Time estimated:** 9 months
  - **Cost:** 183,600 euro
    - Stand-by-labor for the 9 months
      - **Cost:** 1,000 euro
- **Activity:** Ordering material goods:

- **Responsible:** Project Office
- **Time estimated:** 2 months
- Construction goods
  - **Cost:** 15,000 euro
- Interior goods
  - **Cost:** 10,000 euro
- Another supplement
  - **Cost:** 1,000 euro
- **Activity:** Execution of promotion
  - **Responsible:** promotion company
  - **Time estimated:** 2 months
  - **Cost:** 3000 euro
- **Activity:** monitoring and controlling the work, reports
  - **Responsible:** Quality control manager
  - **Time estimated:** continuously

## FINALIZATION

- **Activity:** trial running + controlling the running and maintenance
  - **Responsible:** foreman and architect
  - **Time estimated:** 2 weeks
  - **Cost:** already covered
- **Activity:** open and launch of the ecohostel
  - **Responsible:** foreman, architect, project team
  - **Time estimated:** one week
  - **Cost:** 150 euro for launch event

## EVALUATION

- **Activity:** the proper project working assessment by foreman + staff morale consultations + evaluation of the whole project - study of the needs and objectives met by the results
  - **Responsible figure:** foreman, quality control manager + whole Project team

**Time estimated:** during the 6 months after launching the EcoHostel

Category	Task	Detail	Part	Duraion	Cost(EUR)	cost detail
PREPARATION	Crating draft of PDD	defining 1) the team member roles and 2) stakeholders 3) project deadlines	PM	1 month		
	Detailed description building		PCM	1 week		
	Finding and signing contracts	hiring architect and top	PT	1 month	6000	
	Blueprints "Global Model Earthship"	getting the building pla	architect	1 week	1000	
	Get the financial resources	crowdfunding, sponsors, g	PO - PP	3 months		
	Finding volunteers		PO - PP- PC	2 weeks		
	Financial plan		PO- PP	2 weeks		
	Hire a lawyer	signing a contract	PO - PP- PC	1 month	2000	p/month
	Risk manager will set the risks		RM	1 week		
	Finding a project foreman + 15 workers		PO- PC	2 weeks		
	finding experts	electricity, clay plastering,hydn	PO- PC	2 weeks		
	Find the hostel staff	by open call	PC- PO	2 weeks		
	Planning the promotion	hiring of promotion compan	PM -PO -PC	1 month	2000	
	EXECUTION	Building process		F- 15 W- A- E	9 months	183600
	Extra: building process	Stand-by-labour		9 months	1000	
	Ordering construction goods		PO	2 months	15000	
	Ordering interior goods		PO	2 months	10000	
	Extra: ordering	Other supplements	PO	-	1000	
	Execution of promotion		prom. comp.	2 months	3000	
	Monitoring,controlling the work, reports		QCM	cont.		
FINALIZATION	Trial running		F-A	2 weeks		
	open and launch of the ecohostel	launch event		1 week	150	
EVALUATION	assessment project goals	go through the criteria	QCM - F	6 months		
<b>TOTAL</b>				<b>765 DAYS</b>	<b>224750</b>	
PM: Project Management		PO: Project Office	W: workers			
PCM: Project Content Manager		PP: Project Planner	E: experts			
PT: Project Team		RM: Risk Manager	Pro. Comp.: Promotion Company			
A: architect		F: foreman	QCM: Quality Control Manager			

Figure 4-6: Table of time plan

Task Name	2018				2019				2020			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1 Watch how-to video on this template (4:16)												
2												
3 <b>PREPARATION</b>	<b>PREPARATION</b>											
4 creating draft of project definition												
5 detailed description of the building												
6 finding and signing contracts												
7 getting the building plans												
8 getting the financial resources												
9 finding volunteers												
10 setting the financial plan												
11 signing a contract												
12 setting the risks												
13 finding a project foreman												
14 finding experts of managing building												
15 finding the hostel staff												
16 planning the promotion												
17 <b>EXECUTION</b>	<b>EXECUTION</b>											
18 building process												
19 finding and buying materials goods												
20 promoting												
21 monitoring & controlling												
22 <b>FINALIZATION</b>	<b>FINALIZATION</b>											
23 trial running												
24 opening & launching												
25 <b>EVALUATION</b>	<b>EVALUATION</b>											
26 inspecting the whole process												

Figure 4-7: GANTT Chart

### 5.2.2 Critical path

The critical path has already been taken in consideration in the time plan, considering that the time estimated is the maximum time it could take.

### 5.3 Plan of resources

The project resource plan is included in the project time plan schedule – the types of resources needed for each task are described above. Resources in the time plan were divided into four areas: human resources (*Responsibility*), financial resources (*Cost*) and time (*Time*). The material resources are covered in the chapter 4.5. Financial Plan.

### 5.4 The Risk Plan

While planning the project, one of the most important thing to plan is the risk.

In our group we decided to divide the risks in groups.

<b>Main groups of risks</b>	<b>Technical risks</b>	<b>External risks</b>	<b>Organizational risks</b>	<b>Project management</b>
	requirements	weather	Funding	Planning
	technology	competition		Controlling
		clients		Communication
		State regulatory		
		Finding volunteers		

		To find a right architect		
		Subcontractors		

**Technical risks:**

Risk identification description	Probability 1-3	Impact 1-3	The hazard ratio	Description of the response to the risk
Requirements (building materials, example: leaking through the roof)	1	1	2	We will try to avoid that risk choosing new materials to build from.
Technology not functioning, example: lights are not working	2	1	3	We will produce our own electricity from sun. But in case if there will be not enough sun light for our needs, we will always have second option to make electricity from water.

**External risks:**

Risk identification description	Probability 1-3	Impact 1-3	The hazard ratio	Description of the response to the risk



weather	2	2	4	It may happen that there will be less travelers visiting our country because of the weather. That will reflect to our eco hostel with less working hands. That means that we will need to hire some other people to work for us. On the other side in case of a nice weather and a lot of travelers visiting our country and our eco hostel we can manage to do a lot more work than planned. So in good months, we can do the work in advance, and we can save money not hiring people to work for us.
competition	1	1	2	There is always a place in our minds that someone will copy our idea. But since there is none such building in Slovenia as we want to build it, we are not afraid that someone will copy us with the same speed that we will build it.
Not enough clients	1	2	3	We actually do not have clients. In principle our clients are travelers who are visiting Slovenian nature and who wants to discover alternative ways of travelling and living. The lower the number of travelers in our Ecohostel will be, the less work will be done.
Clients that will make damage and not willing to cooperate with the rules in Ecohostel	1	1	1	We will make everyone know that they must follow the rules if they want to live in our Ecohostel, otherwise they will be moved out. In case of homeless people use Ecohostel for shelter they will have to work as others.

State regulatory issues	1	1	2	We will do our best, to have everything covered according to state law. So, we will try to avoid any state regulatory issues. But if the problems with state regulations will occur, we will immediately try to pay the fine or correct the mistake according to regulations. We will also hire a lawyer just to make sure everything will be fair and according to state law.
finding volunteers (workers)	1	1	2	At first there will be hard to find volunteers (workers). But we count that our enthusiasm and our commitment to work on that project will inspire volunteers to join us.
finding an expert architect	1	3	4	We will put extra attention to find the right architect for us. To do so, we will use the architect that was already involved in building Earthship. We will make sure with the contract that he does not leave us in the middle of the project.
Entrepreneurs (electricity, clay plastering...)	1	2	3	We will compare the offers from entrepreneurs, so we will be able to choose the proper one for us. With the contract we will make sure, that they do not leave us in the middle of the work.

***Organizational risks:***

Risk identification description	Probability 1-3	Impact 1-3	The hazard ratio	Description of the response to the risk
funding	2	3	5	Our major source will be crowdfunding and donations from private investors. We will make promotion video to show others why they should support us. If we will not get enough money, we will just prolong our promotion campaign till we get enough money.

***Project management risks:***

Risk identification description	Probability 1-3	Impact 1-3	The hazard ratio	Description of the response to the risk
Planning (extension of time frame)	2	1	3	We made the time plan according to our prediction on how much time some steps will take. To prevent the time frame extension, we added some additional time to every planned step.
Monitoring and controlling the project	1	1	2	We will maintain the control over the project with regular quality checks. With regular quality checking no major mistake in building process can happen.

communication	1	1	1	We will make a board where the weekly work will be posted, so everyone in the project will know what are the weekly goals. With that board we avoid many weekly phone calls and miscommunication.
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One special problem is the problem of monitoring the risks. If people will come in and go, there may occur a problem with monitoring the risks. So, there should be at least one person present throughout the full year - whom we have decided to cast as the foreman. To check risks and to warn others to act when the risks happen. To prevent risks everyone who leaves the eco hostel, should write on paper what his occupations in ecohostel were. So that his occupations can be redistributed to other who stayed.

## 5.5 Financial Plan

While doing project, Project managing team can estimate how much expense will take on specific tasks. After setting Gross Expense, Gross income which will be the total costs of sponsor, funding, support should be arranged more than expense. The expense has been measured conservatively. The below table show the expense and income and details for each task, human resource, material, etc.

**The Income - Expense Statement of Earthship  
for ongoing/ended task(2018.01.01 ~ )**

	Estimation(eur)	Actual (eur)	Difference	Note
<b>Gross Income</b>				
9) Crowd funding	100,000			with promoting
10) Sponsors (Companies)	60,000			at least four companies
11) Sponsors (resident)	20,000			from Slovenian
12) Sponsors (Environment civic group)	10,000			from intenational institution
13) Government Support	40,000			from Slovenian government or tourist commission
<b>Total</b>	<b>230,000</b>			
<b>Gross Expense</b>				
<b>Materials</b>				
1) for building	15,000			materials for building & interior
2) for managing	10,000			bed, sofa, kitchen, chair.. Etc
3) others	1,000			others supplements
<b>Personnel / Hiring</b>				
4) for preparation	7,000			architect/ exopt of managing / topograper
5) for execution	183,600			foreman/ 15 workers / architect/ experts of various parts
6) for lawyer (about permmission)	2,000			permission & contract
7) for promotion company	5,000			making video & website
8) for luanching	150			for luanching events
others	1,000			stand-by labor
<b>Total</b>	<b>224,750</b>			

< The Income - Expense Statement of Earthship Project - only Estimation >

**Expense projection**

**1. materials**

The materials which be used for building are included in this category. There are three parts of materials which are, as follows:

1) for the process of ongoing construction

1-1) are used for construction as clay, wood, plastic, which is the main distinct characteristic because they(recycling) can be collected in one local society

**1-2) are used for producing or collecting natural resources**, which is important things for sustainable eco- hostel

**2) for management** - are used as supplies for managing hostel and visitors.

**3) other aspects.** - for supplements which are used on construction or managing

*Table of Materials for building*

<b>Materials for construction</b>	<b>Materials for natural resources</b>
Clay	solar panel
Tire	Batteries for solar panel
Can	Sine wave inverter
Plastic	Water storage tank
Glass	Filter for purifying
Others	Converter
	Others

*Table of materials for managing*

<b>Materials for rooms</b>	<b>Materials for entire</b>
Pillow, bed, cover, blanket...	Tile
Chair, table	Wall paper
Clock, Light, Lamp	Marble
Others	Others

## 2. Personnel / Hiring (not cover PM member salary)

Building Earthship needs a variety of experts who will charge of a different field. It can be divided three parts of the progress of tasks:

4) **PREPERATION** - experts, architect, topographer

5) **EXECUTION**

<b>Duty</b>	<b>Monthly Salary (euro)</b>
Foreman	1,600
per worker * 15	1000 * 15 = 15,000
architect	2,000
Expert of electricity	500 (4 times in one month)
Expert of clay & painting & last touches	700 (4 times in one month)
Expert of hydroizolation	600 (half of month)
<b>Total cost for one month</b>	20,400 eur / month
<b>Total cost for whole period (9 months)</b>	183,600 eur / 9 months

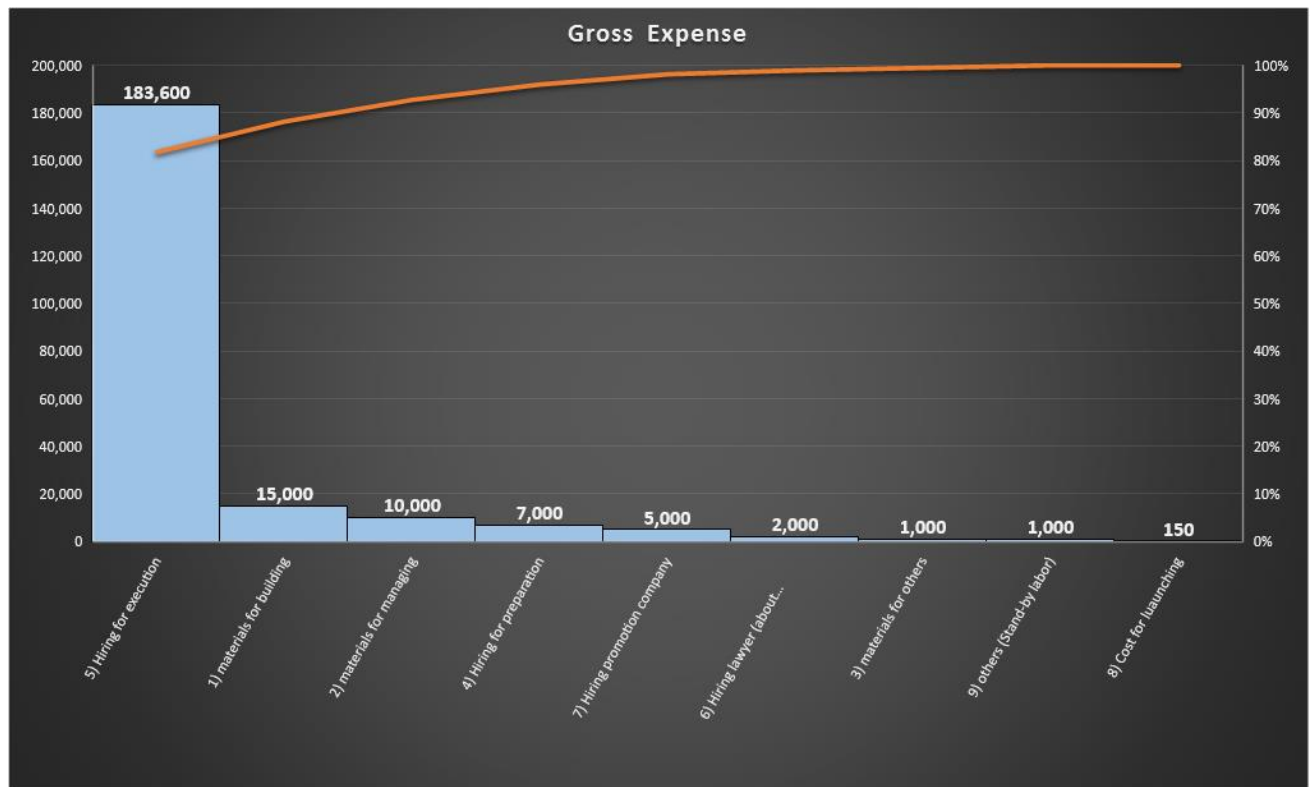
6) **PERMISSION** - The lawyer will charge whether the design and construction are suitable for legal proceeding and get permission of the local community or public institution.

7) **PROMOTION** - A Promotion company will plan the promotion before construction and execute after building hostel through various channels of media.

## 8) LAUNCHING - A set up of a set of events for starting and launching the hostel

<A pareto chart of Gross Expense>

A Pareto chart shows the distribution of data in the reverse order of frequency. In addition, the cumulative line is displayed on the secondary axis as a percentage of the total



## Income

Income should be more than expense to progress architecture construction without loss. The total costs of the gross expense is 224,700 eur. That means financing should be supported more than 224,700 eur from others. It can be divided into three groups: crowd funding, sponsors, support from official institution.

**9) Crowd funding:** Consumer who needs funds collects funds for the unspecified masses through online platforms

**10) Sponsors (Companies):** Companies can sponsor this project in various way like promoting their products or brands or just for CSR project.



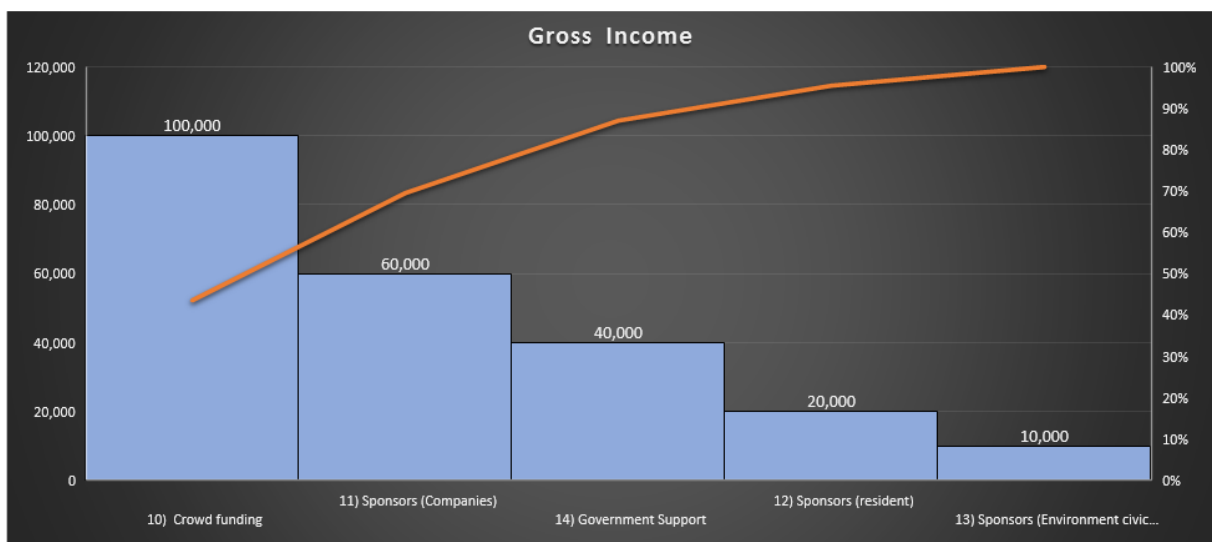
**11) Sponsors (Resident):** Resident who live in Slovenia can sponsor as a part of community contribution activities.

**12) Sponsors (Environment civic group):** from international Environment civil institution

**13) Government support:** from Slovenian government or promotion of culture & tourist commission

*<A Pareto chart of Gross Income>*

*A Pareto chart shows the distribution of data in the reverse order of frequency. In addition, the cumulative line is displayed on the secondary axis as a percentage of the total*



## 5.6 Quality Plan

The goal of the quality plan is to show improvement of the project, monitor and control team and experts' work progress as well as the deadlines, and to record results of executing the quality activities. In effect, we will determine the correctness of deliverables. In the final preparing we will compare the documentation with what has been done and see how (and if) the project demonstrate compliance.

For the highest quality of our project, we will be making project document's updates and developing the schedule continuously. We will be measuring the quality of products and

materials used during building Earthship EcoHostel. After monitoring the results of work, we will recommend necessary changes.

To assess the inputs used to develop the project charter, we will use the expert judgment, so in our project people different occupations, with specialized knowledge and training will take part. We will be cooperating with stakeholders (sponsors) and subject matter experts from professional associations, interested in ecology and building earthships. To projecting the Earthship EcoHostel with the highest quality, the content manager has prepared detailed description of the hostel, and we will hire following experts (for all the activities): architect, topographer, lawyer, project foreman, electrician, hydroizolation expert, painter and building team.

The Architect and topographer will be hired with the object of helping us with the project and selecting an excellent place to build it. After the consultations, we will sign contracts and start planning the interior as well as exterior of the building. The experts will help us to choose the materials and equipment which are solid but at the same time cheap. We will also sign the contracts with the project foreman and 15 workers and experts who will finish building – electrician, painter and for hydroizolation. We will find the hostel staff. About the finances, we have created a financial plan and will hire a lawyer who will manage building permission and sign contracts.

During this time, we will search for financial sources to build our hostel – we will contact sponsors and crowdfunding.

Because of another idea of this project which is to integrate people and give them the complex knowledge about the ecology and Earthship Ecohostel, we decided to start cooperating with volunteers them from the beginning - we plan to find interested volunteers, who want to participate in our project and help us. We believe that their enthusiasm will also help with realizing this project.

We have also planned the promotion – we will hire a promotion company. We have decided to promote our project on the Internet and spread the information about it on social websites and what is more, make a promoting video, what will happen in execution part of the project. Another activity during the execution is to start building process and create the environment. All the time monitoring and controlling the work was done by the quality manager. We have decided that the evaluation will last six months.

We described the purpose of our project and work and timeline (start and end) of each process which will take a place, its outputs and inputs. We submitted all the data and prepared a graphic depiction of processes.

Quality planning in this project is performed in parallel with risk and financial analysis and all other planning processes. In cooperation with Risk Manager, we identified risks which may have impact on quality (see: Risk Plan). A diverse set of problems was created by risk manager. In cooperation with Financial Manager - we measured the costs of the performance. The main of our project is, among others, to build and design a place with the lowest investment outlays that's why measuring quality will prevent mistakes and assure less rework and lower costs.

We created informal quality management plan describes how team members will implement the performing organization's quality policy. Continuous improvement process during building the Earthship EcoHostel will be performed.

Among the quality planning tools will be brainstorming. To define the quality requirements, we made up diagrams to show relationships between factors, causes and objectives (see Annex).

Quality control which is performed throughout the project will help to avoid failures and recommend necessary changes. Because of quality standards, we will use new materials to build the Earthship EcoHostel.

If the quality of product is poor (what we will be checking continuously), we will eliminate it. Measurements will be conducted at every level - from preparing the document till the end (steps) final product and individual activities throughout building hostel

We will prepare quality control measurements which are documented results of quality control activities specified at the beginning, from the time of writing document called Project Plan. The quality manager will be using a tool called checklist to control if required steps has been performed. The document will be updated continuously in case of changes (revising work schedule or methods, repairs...). In the end of the project, the quality control measurements will be used to analyze and evaluate quality standards.

## **6 ANNEX**

### **6.1 Excel Financial Plan & Time Plan**

See:

[https://docs.google.com/spreadsheets/d/1zwmqyVXi7RdWoLyDPozreK\\_4teMD7gtHeOCLiHIwkCY/edit#gid=303658551](https://docs.google.com/spreadsheets/d/1zwmqyVXi7RdWoLyDPozreK_4teMD7gtHeOCLiHIwkCY/edit#gid=303658551)

### **6.2 Answering Quality Criteria for PDD**

#### **1. Does the document correctly represent the project?**

The document represents the project properly, despite that the document has still many options for improvement. The project is represented in way that anyone can understand what our project is, even if they have no idea of what Earthships are.

#### **2. Does the document reflect a stable and feasible project, which is in line with the strategy of organizational system and in accordance with the program (if part of it)?**

The document reflects stable and feasible project which is in the line with the strategy of organizational system and in accordance with the program. It was prepared after discussing and reporting the finances and risks. Every key component of the plan is enclosed here. The document demonstrates compliance with the discussed program.

#### **3. Does the organizational structure mention all: involved team members by the full names and titles?**

In our organizational structure we mentioned all the members and we equally distribute the tasks among us.

#### **4. Does the document clearly state the regime of supervision and reporting, which can be implemented, and correspond to the size, scope of business risk and business relevance of the project?**

We stated in the evaluation part of the time plan that the proper project working assessment will be executed by the foreman that has followed the whole building process, furthermore there will be staff morale consultations by making interviews. The evaluation of the whole project will be conducted a study if the needs and objectives met by the results.

5. Does the specified control of the project meet the needs of the project supervisory board, the project manager and sub-project group leaders?

As laid out, our general plan has encompassed all the requisites of excellence required for the elapsing of a successful project, salvo any incoming unknown risks we might incur.