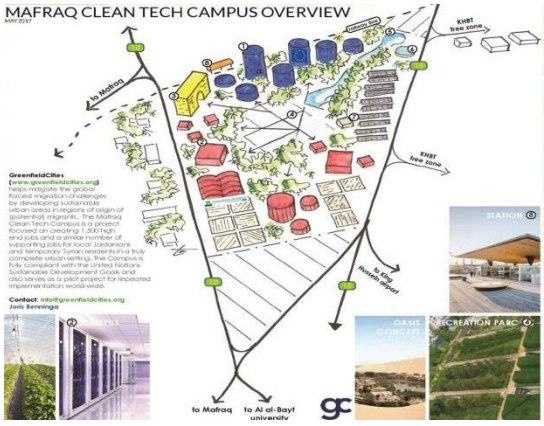
Mafraq Campus Pilot Project to Help Reduce Forced Migration

A Proposal for a Feasibility Study



Organization: Stichting GreenfieldCities

Authors: Joris Benninga
Arie van Beek
Hedzer Roodenburg Vermaat

Date: March 2nd 2018

Key Decision Points and Executive Summary

Sponsor	Ministry of Foreign Affairs, Department of Stability and Humanitarian Aid, Migration and Development group
Beneficiary	Stichting GreenfieldCities
Budget requested	€ 398.000
Type of contribution	Grant
Duration project	10 months

GreenfieldCities (GFC) is a Dutch ANBI foundation working to help mitigate forced migration. GFC works with refugees (*statushouders*) and Dutch education and industry partners to develop sustainable urban areas in regions of refugee origin. GFC aims for solutions that are ultimately economically self-sustaining forming an attractive private sector impact investment proposition.

After 2 years of preparation, invited by Jordan stakeholders, GFC is ready to commence the feasibility phase for developing a pilot: a clean tech campus in Mafraq, Jordan. A key goal is to create a truly lasting (hence sustainable) *enabling environment* for job creation for Jordanian and Syrian people.

Key deliverables should provide answers to all important feasibility questions: to what extent is it financially, legally, politically, technically feasible and are public and private stakeholders on board? Can we stimulate job creation in the numbers we foresee? Can the proposition attract impact investors?

The campus development and the activities at the campus should ultimately create 1.500 direct jobs and 1.500 indirect jobs (in total: 3000 jobs). The feasibility study will also include testing the possible contribution to SDGs 4 (quality education), 5 (gender equality), 8 (decent work & economic growth), 12 (responsible consumption and production), 13 (climate action), and 16 (peace, justice and strong institutions). The study will provide specific project goals for these SDGs. Last but not least the study will include a rough order of magnitude estimation of the regional scalability potential of the solution.

Figure 1 presents the timeline of the project including the steps after the feasibility study has finished. If all so-called decision gates down the road are passed successfully, the first phase of the campus could be built in 2 years' time.

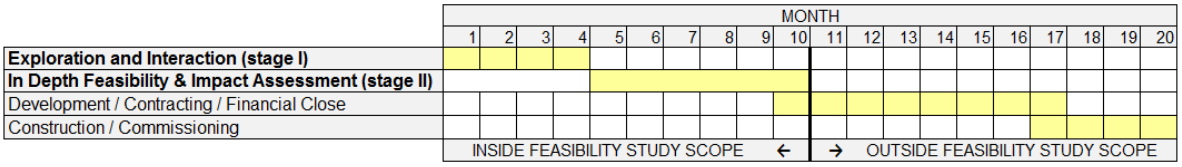


Figure 1 Timeline feasibility study including next steps.

The study activities will also be used as a learning by doing approach for strengthening the GreenfieldCities organization itself. The lessons learned will be used to increase focus on the necessary resources and processes and gradually transition GreenfieldCities to a well scaling international social enterprise. At the same time typical policy issues will become more clear: could this type of innovative approach help reduce migration to the EU?

Table of Contents

1. Introduction

1.1 Background Situation

The European Union faces a circle of instability around its territory that poses a challenge for EU-governments and citizens. Youth in the Middle-East, Northern Africa and further southwards on the African continent face insecurity, unemployment and a lack of perspective on a better future in their countries. Many take the risk to cross the Mediterranean under life threatening circumstances to reach the EU. Countries such as Greece and Italy have to deal with the stream of mixed migration, as neighboring countries close down their borders and it turns out not to be easy to create consensus among all EU member states when it is about dealing with migrants. There is decreasing political support within EU member states to offer refuge to migrants on EU-territory. However, with upcoming consequences of climate change and resource-scarcity in regions where the size of the population rather grows, more migration streams to the EU can be expected, both as a result of conflict and/or economic malaise. The time is now for exploring alternative and more effective migration mitigation measures.

1.2 Vision GreenfieldCities and Relation to the Project

GreenfieldCities (GFC) aims to contribute to the reduction of migration by giving a sustainable economic boost to the migrants' regions of origin through the development of *enabling environments*. These enabling environments, the "greenfield cities", act as showcase for sustainable social, technological and economic development for a wider region. GFC gathers specific local needs and opportunities in target regions and translates these findings into concrete development initiatives for enabling environments in the form of "campuses". A GFC campus has a compact footprint, but it includes most social, economic and infrastructural features of a modern smart-city. It should literally be a physical and visible place where locally relevant job, education and living opportunities can be found and created.

GFC provides a long-term commitment to projects that nurture a campus to further growth, increasing its impact on the wider region. GFC provides that long-term commitment by not only taking responsibility for the development of a campus, but also by operating its key infrastructure parts and continuously promoting social, gender, economical and institutional development while using the campus. GFC aims to complement existing or prospect plans and programs of national authorities, embassies and development agencies through partnerships. Also in that sense, the GFC programs on a campus are demand-driven. GFC aims to maximize the sense of ownership among users of the campus and strives for full integration of the campus and its projects in existing (semi)urban societies. Ultimately, GFC seeks scaling and repetition of the concept to many regions of refugees' origins driven by attractiveness for Impact Investors and authorities both in the EU and in the region. In this way GFC aims to tackle the most dominant drivers for emigration: unemployment and instability due to unsustainable living circumstances.

A specific part of the GFC vision is that talented refugees, currently residing in the Netherlands bring in substantial parts of the local perspective and local knowledge. The majority of the GFC team consists of Syrian nationals and working for GFC helps them to improve their international career perspectives and integration in Dutch society as well. In its inception statute, GFC embraces a subset of the Universal Declaration of Human Rights and for day to day decision making, the UN Sustainable

Development Goals (SDGs) are important GFC guidelines. It is therefore consistent with the GFC vision to attempt to qualify and quantify a number of impact parameters for selected SDGs.

Summarizing, the three main components of the GFC vision are:

1. Bring local needs and local opportunities together in the campuses
2. Ensure that the social-, technical- and financial designs for the campus are truly sustainable
3. Commit to the campuses without end-date in an impact investor funded business model

1.3 From Vision to Pilot-Project in Mafraq, Jordan: Results Pre-Feasibility Study

Translating the GFC vision to concrete results requires research and development of a method and approach for the implementation. After dozens of interviews with experts, market research and workshops, GFC narrowed down the geographical location for a first project to the city of Mafraq. GFC decided to test the idea for a pilot-project with the size of a campus in the Special Economic Zone (SEZ) of Mafraq in Jordan. Mafraq is one of the most affected Jordanian cities by the Syrian refugee crisis, but also offers potential with the presence of many Syrian nationals, the *al Al-Bayt* university, its proximity to the city-center of Mafraq and Za'atari refugee camp, and its location at roads that are connected to Irbid, Amman, Damascus and Baghdad.

The project purpose for the campus in Mafraq resonates with the GFC vision: giving *a sustainable economic boost* to Mafraq region through the development of an enabling environment in the form of a campus in the King Hussein Bin Talal *Special Economic Zone* (KHBTDA SEZ) in Mafraq where jobs, educational opportunities and housing for Syrian and Jordanian nationals (18-30 years old)[1] are created. The campus should keep talent from Mafraq (from Al-Bayt university for example) close to the city so that they do not have to move to Amman or even abroad to find jobs matching their capabilities. GFC envisions the campus as an enabling environment where three functions come together:

- Working (job creation)
- Learning (education)
- Living (housing)

Market research has also shown that quick results are important for success in Jordan. This is a challenge as bureaucracy and the complex regulatory framework in Jordan could lead to campus development times of more than 5 years. The existing spatial planning framework for the SEZ will partly alleviate this. Furthermore, quick physical results and flexibility on the campus can be reached by working with a *pop-up concept*. The pop-up concept for the campus is defined as the use of temporary, but high quality modular civil infrastructure (think about modular architecture) that is easy to be transported and replaced. As the campus develops over time, temporary pop-up components will be replaced by permanent infrastructure. The temporary components can be used somewhere else, preferably at another GFC mission, and are thus not wasted. Such pop-up concepts are easy to deploy, do not require much time to place, can benefit from partial exemptions from permits and reduce design and on-site construction risks. Moreover, even the pop-up concept guarantees a high sustainability performance. Finally, the pop-up concept also increases the Dutch stake in the concept as Dutch manufacturers can develop the components. This constitutes an international trade opportunity.

[1] GFC primarily aims at Jordanian and Syrian youth, because their unemployment rates are very high.

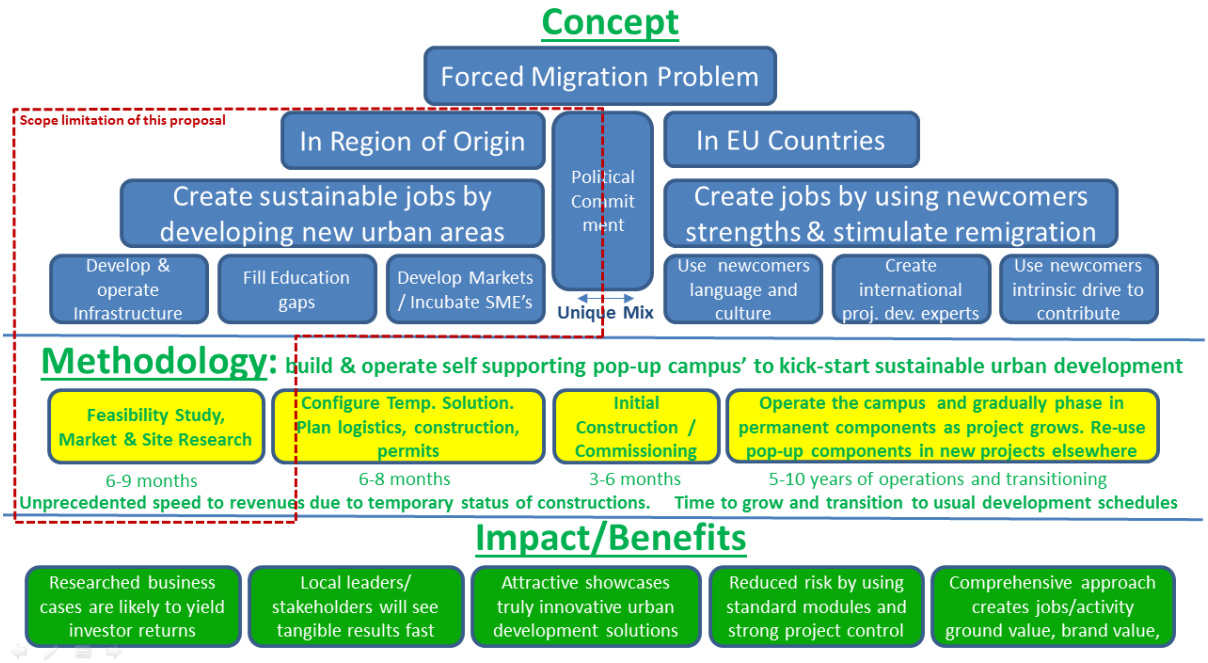


Figure 2 The project scope and relation between concept (blue), pop-up method (yellow) and impact (green). The red dotted line indicates the scope of the feasibility study.

The campus should function as a small sustainable 'village' that is still well-connected to Mafraq. It will need to create jobs relevant for the future of Jordan and therefore support the regional economy as well. In order to create jobs and educational opportunities, the campus should attract people, businesses, institutions and capital. The campus design and positioning will include a number of features to boost attractiveness for these targets groups:

- The location is good: close to the city and *al Al-Bayt university*, inside the SEZ (tax breaks and clear regulatory framework) with good road- and rail access.
- Sustainability and high quality of services (water, energy, connectivity) on the campus.
- Good governance and continued support that GFC offers during the operation phase of the campus.
- Visibility of the innovative character of the campus, including small scale solar PV, wind turbines, greenhouses, attractive public space, leisure, job fairs and other activities.
- Practical access to education for both higher- and lower educated Syrians and Jordanians.
- Proximity/concentration of like-minded people and companies in specific sectors.

To create a successful social-economic environment that promotes innovation, a mix of actors and functions are needed. To be able to determine what mix of sectors and job types would be most relevant for the future of Jordan, GFC conducted market research together with the 1 CMI Command of the Netherlands MoD and undertook three research trips to Jordan. This resulted in five sectors that are promising to explore:

1. IT
2. Agriculture
3. Energy
4. Water
5. Leisure

Ad 1. IT

There is an ongoing national IT-program in Jordan with potential to grow and job opportunities for the next years. One of the focus points could be to close the existing gap between IT graduate skills and market needs. This can be achieved by creating a post-graduate IT skills development program, very much like the successful "Hack your future" initiative in Amsterdam. GFC has reached out to the global Python programming community to set up a "buddy to certification" system. Furthermore an IT startup incubation program can be started.

Ad 2. Agriculture

Contemporary agriculture counts for 60-70% of Jordan's water usage due to the cultivation of water-intensive crops and inefficient water use. There is the need and the potential to grow less water-intensive crops for different markets, but the agricultural sector is conservative and often lacks access to capital. One of the focus points could be to demonstrate farmers that the cultivation of less water-intensive crops can be done effectively and economically in a semi-commercial *farmer field school* on the campus. GFC partners with Wageningen University & Research can set up such a program.

Ad 3. Energy

The demand for energy in Jordan increases fast and Jordan covers over 95% of its needs by imports. This makes the country vulnerable to supply shocks as was demonstrated in recent years when cheap Egyptian natural gas had to be replaced with expensive fuel oil. High energy cost-prices created large budget deficits and slowed down private sector growth. As from last year, the new LNG terminal in Aqaba came on-line, restoring access to relatively cheap natural gas. Nevertheless, the energy situation in Jordan is dire and improving efficiency and adding more renewable energy power is necessary. The GFC campus can contribute by fostering educating designers and engineers and foster entrepreneurship in renewable energy initiatives. Specific focus will be on renewable energy integration into the existing grid system, and energy use reduction in the buildings.

The design of the Campus obviously will aim itself at energy neutrality and energy production. In general this already leads to more local jobs, also in the operating phase of the pilot. During this study the feasibility of setting up a local sustainable energy company that will service both the Special Economic Zone and Mafraq. It can be expected there is a large potential for energy saving and renewable energy to unlock in these areas. This will result in substantial investments in the local economy and will create more sustainable jobs.

Ad 4. Water

Jordan is in the top 5 of water scarce countries in the world. Jordan has several mega-projects in the pipeline to reduce the current practice of depleting fossil aquifers. These projects progress very slowly and lack local focus. The country offers opportunities for small-scale initiatives related to, efficient use, sewage treatment and other water-harvesting techniques. One of the focus points in the Campus could be to use the campus own water management and recycling system to educate more Jordanians and Syrians in water-management practices, and develop the conditions for replicating the Campus own water management system elsewhere.

Ad 5. Leisure

According to USAID (Report: Jordan Tourism Sector Assessment, challenges today, opportunities tomorrow, 2013), Jordan is well-positioned to move from a regional, multi-country tourist

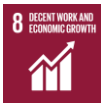
destination to a standalone destination with a portfolio of tourism products with year-round appeal for foreign and domestic visitors. That same report also states that Jordan should increase its professional hospitality workforce, reduce dependence on foreign workers and improve public and private sector collaboration. Mafraq currently has virtually no hospitality sector and the campus could introduce and stimulate the sector. Initial market research already indicated a 40-50 room hotel facility is a quick win opportunity. Such a hotel can serve as workplace and a place where people get training on the job. Last but not least, a hotel can add to the liveliness of the campus and can attract visitors to Mafraq and its surrounding historic sites.

The Campus will ultimately attract and offer space for activities from more sectors than the 5 mentioned above. One can think about shops or healthcare functions for example. During the feasibility phase elaborate research will be done locally to check which (combinations of) sectors are most attractive. It might occur that the focus will be on less- or other sectors after the feasibility study than initially described in this proposal.

1.4 Campus Pilot-Project Outputs (After Realization)

Outputs are defined as the concrete results and impact when the Campus has been built and is operating. At this stage, based on the research GFC did so far, some outputs and impacts can already be predicted with moderate levels of confidence. Other outputs are desired but much less sure and the feasibility study should help to assess how outputs can be optimized and impact maximized. For reasons of aligning project output with an internationally recognized policy framework they are related to a number of relevant SDGs, see Table 1. Apart from these project outputs, there is the important output of building the campus itself, its infrastructure and operations.

Table 1 The main targeted project output/impact related to the most relevant SDGs for the pilot-project.

SDG	*Description*	*Indicators/ impact performance metrics*	*Error margin pre and post feasibility study*
	Decent work and economic growth	• number of created direct jobs and level of wages (1.500 @ €22.000/yr average) • number of created indirect jobs and level of wages (1.500 @ €12.000/yr average) • Avoided costs for reception and integration for migrants in EU/NL (750 @ 150.000/1st 5 yrs)	Pre: 50% Post: 10%
	Quality education	• Post-education professional success (>80% that finds job within 3 months)	Pre: 50% Post: 10%

SDG	*Description*	*Indicators/ impact performance metrics*	*Error margin pre and post feasibility study*

	Climate action	• Avoided GHG emissions (>2.5 kton/yr and > 40 kton as 15 year total)
		• > 100% renewable energy supply
		• Building energy intensity (kWh/m2/yr)
		  ○ office: <65
		  ○ home:<45
		  ○ education:<55
		• Water usage (< 20m3/person/yr),
			Pre: 20%
			Post: <5%

	Gender equality	• participation grade of women (>50%) • equal rewarding target (100%)	Pre: 50% Post: 5%
	Peace, justice and strong institutions	• Percentage of Campus users that trusts and appreciates the GFC governance (Campus management & operations) practice (>80%)	Pre: 50% Post: 10%

1.5 Overall Planning of Pilot-Project

Based on prior research, the project will start with a 10 month feasibility phase that is also the scope of this proposal. After that, a 6 month development phase should lead to a permitted and shovel ready project, allowing for the pop-up phase to be executed. This pop-up phase will create around 250 jobs. Based on the success of the pop-up phase and the created enabling environment, more permanent infrastructure and economic development activities will see the Campus grow to its targeted 3000 job size in around 5 years' time.

1.6 Organization GreenfieldCities

GreenfieldCities is a dynamic foundation based in Arnhem that exists since February 2016. The foundation board consists of Mr. Joris Benninga and Mr. Arie van Beek who currently work with six refugee talents from Syria and Eritrea. These talents are connected to expert coaches made available by partners, to develop their capacities in order to play an ever growing role in the organization. GreenfieldCities has a preliminary supervisory board and intends to form an advisory board of experts to help in the development of GreenfieldCities' methods.

Why GreenfieldCities?

GFC offers advantages with its innovative concept and methodology.

Mission and Vision GFC

- Aims at aligning Dutch and Jordanian interests.
- Develops/Defines a proposition that is attractive for impact investors.
- Aims at combining job creation and education with sustainability and the future of Jordan.
- Aims at supporting Jordanian stakeholders to commit long-term by leading the operation of the campus.

Achievements GFC

- Has developed an innovative concept and methodology that leads to quick results (pop-up).
- Has tested the waters with a business case to build a pilot campus to key Jordan stakeholders and Dutch stakeholders.
- Has created fertile ground for business potential of Dutch stakeholders in Jordan.
- Has developed a proposition that is attractive for impact investors.
- Has experience for over a year of work with Syrian refugees.
- Has a broad network in Jordan and The Netherlands that leads to easy recruitment, connections with experts and partnerships.
- Founders have a track record in company and solution building based on product market combinations at pre-commercial stage. This track record in the energy transition vertical can at many aspects be compared to creating the enabling environments like GFC envisions. In both cases is about managing a complex stakeholder problem, ultimately leading to creating trusts, high levels of confidence, and closure of bankable investment propositions

1.7 Funding Focus

This proposal aims at funding the feasibility phase by the Ministry of Foreign Affairs. GreenfieldCities will endeavor to attract impact investors for the development phase and the construction phase of the pilot-project in Mafraq. In 2016 and 2017, already dozens of meetings have taken place with foundations and private sector investors. Contacting potential investors has proven to be relatively easy. Getting them to fund GFC is more difficult. The feedback that impact investors generally gave to GreenfieldCities in those meetings is that they judge the idea positively, but need more specific cases and better understanding of risks. The feasibility study process and deliverables are key tools for discussing specific investment opportunities with these parties. The development of the pop-up concept was partially fueled by investor feedback. Moreover, GreenfieldCities expects that it is likely that for the development phase additional grant funding in the range of €300.000 to €500.000 can be attracted as many impact investors offer staged financing that includes feasibility and development financing. Annex B. has a list with potential investors that GFC already talks to.

2. Goals and Scope of the Feasibility Study

2.1 Goals

The feasibility study for the Mafraq Clean Tech Campus pilot-project has three main goals:

1. To assess and judge with a high level of confidence whether and against what conditions it is feasible to practically execute the GFC methodology for the campus in Mafraq and to what extent it is feasible to scale the concept.
2. To assess and judge with a high level of confidence whether and to what extent it is feasible to achieve the contributions (expressed in metrics) to the most connected SDGs through the campus in Mafraq.
3. To assess and judge if the GFC business-case is attractive for private sector impact investors (“attractive” implies willingness to be financially involved in the next stage of the development of the campus).

2.2 Scope

The feasibility study focuses specifically on the pilot-project of the campus in Mafraq, but also tests to what extent it is feasible to scale the concept in Jordan and other areas. The starting point for the feasibility study is based on previous market research, interviews with experts, workshops and research activities in Jordan. The feasibility study includes (1) the feasibility of the project itself and the possibility for a rough estimate of the possibility for growth beyond the pilot-project, (2) an SDG impact assessment of the project and (3) a financial feasibility study related to the attraction of private sector impact investors.

The feasibility study will not include work on the development of the GFC team and proposition in the Netherlands beyond the necessary, basic organizational functions to be able to perform a high-quality feasibility study.

3. Action Plan Feasibility Study

The feasibility study is divided in two stages:

I. Exploration and Interaction
II. In-depth feasibility study including an impact assessment.

In Figure 3 the two stages are visualized including their main activities.

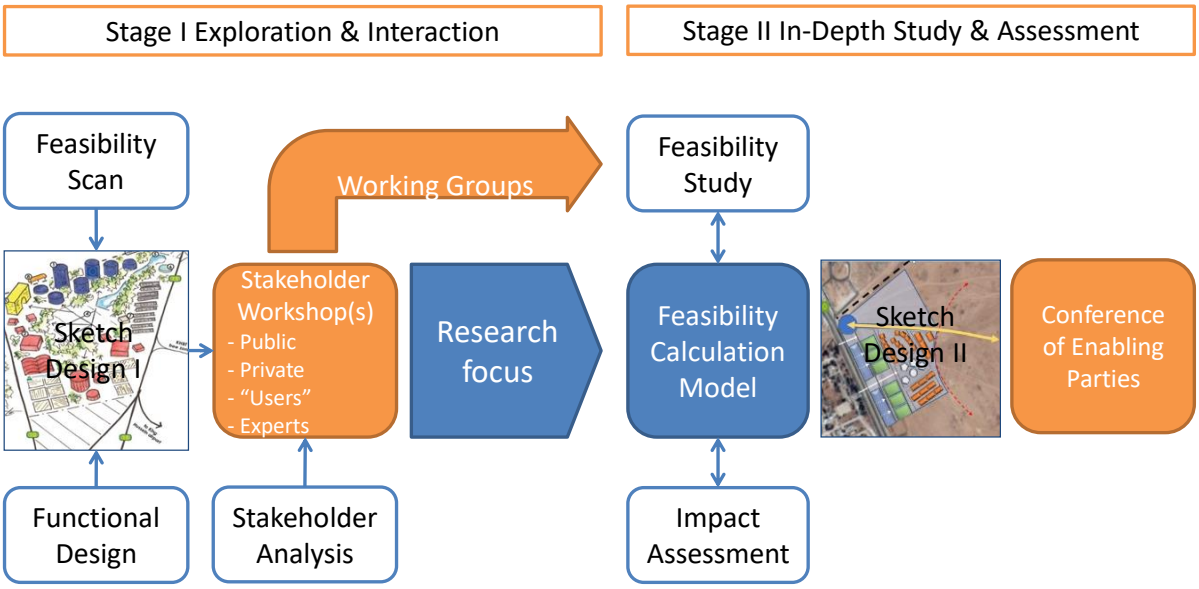


Figure 3 Two stages and key tasks and elements in the feasibility study.

The starting point of this feasibility study consists of the results of previous studies as described in Section 1.3. The final results of this feasibility study will be presented in reports and during a *Conference of the Enabling Parties*.

Stage I: Exploration and Interaction

In this stage GreenfieldCities:

1. Performs a stakeholder-analysis
2. Scans the key elements for feasibility

3. Makes a sketch design I for the campus
4. Discusses the concept and sketch design I with key stakeholders of the campus through workshops, focus meetings and meeting with (potential) partners.

Task I.1 Stakeholder-Analysis

The stakeholder-analysis identifies stakeholders in the Jordanian and the Dutch context, analyses their interests and their drivers, assesses their position towards the pilot-project and assesses their power and influence in the Jordanian, Dutch and EU field. Per stakeholder we explore as well whether and how they can contribute to the project, and what GreenfieldCities can specifically do for them. We will informally perform stakeholder analyses on a monthly basis with input from desk-research and meetings in the field to gain an up-to-date overview of the playing field. This analysis supplies input for our strategy and provides input for the list of participants for the workshops and the way to organize them. All (potential) partners, stakeholders, partnerships and updates are processed and documented in an already existing 'partner directory'.

Method(s): *Desk research and meetings in Jordan*
Deliverable(s): *Sheet per stakeholder with interest, position, influence and contribution*

Task I.2 Feasibility Scan

Key elements for the feasibility scan include:

- *Economical:* explore the needs and potential for jobs in our five sectors for sustainable economic development of Mafraq region.
- *Educational:* explore the needs and potential for education in our five sectors for sustainable economic development of Mafraq region.
- *Legal:* analyze which permits and approvals are necessary, which procedures have to be followed and analyze the rules and regulations for the development of the campus at our preferred location in the SEZ.
- *Spatial:* analyze current facilities at the site such as the energy-, water-, IT- and waste-system and assess the potential to create links between the campus and Mafraq town.
- *Technological:* assess the availability and-state-of-the-art of various technological solutions and the potential for implementation of our technologies in the specific context
- *Financial:* analyze the financial feasibility for the campus on the basis of key figures, a cost estimation for the project and the identification of potential impact investors for the next phases of the project.
- *Environmental:* assess which environmental issues may occur and what their effect can be on the pilot-project's permits, costs and development path
- *Sustainability:* analyze the possibility for integration of sustainability showcases in the buildings itself, the site, the infrastructure, the systems and the operation of the campus.
- *Social:* assess potential needs for future users of the campus, gender equality and to increase the likelihood of a lively campus that is accepted and used by Jordanians and Syrians.
- *Political*: assess the support of the Jordanian, Dutch and EU politics for the concept and the particular pilot-project in Mafraq.
- *EU values:* analyze which EU values can be integrated in the design and implementation of the campus and how these can be integrated,
- *Risks:* draft a list of risks

- *Scalability:* assess the potential for growth of the campus, the transition from temporary pop-up structures to more permanent structures and the enthusiasm to implement a similar approach in other contexts.

GFC will search for examples of similar entities as the campus both in Jordan and the Netherlands (e.g. business-parks or knowledge hubs) and integrate findings in the feasibility scan to identify challenges, lessons learned and recommendations to be related to the key elements of this scan.

Methods: *Desk research, interviews, surveys, workshop(s), focus meetings and visits of stakeholders and potential partners*
Deliverables: *a. Memo with results of the feasibility scan of all the elements*
b. A list of workshops participants based on this scan
c. List of interested impact investors and minutes of meetings
d. List of potential functions in the campus (Program of Requirements)
e. Challenges, lessons learned and recommendations from similar entities

Task I.3 Sketch Design I

A sketch design of the campus in the form of impressions is not only necessary to underpin many aspects of the feasibility study, but is also key in mobilizing expert-knowledge and political and financial support. Based on previous sketches and the results of the feasibility scan, key design parameters and functions for the campus can be drafted, including potential links to Mafraq town, the *al Al-Bayt University* and other functions in the environment. The existing railway for instance could be used to link public space in the campus with the public park in Mafraq. We propose that a sketch design I is made by groups of 4th or 5th year students of the Faculty of Architectural Engineering of the University of Jordan in Amman as a design assignment for their university. This way we gather different perspectives on the campus, we embed the Jordanian values and gather multiple design variations of which we will select one for further development. Our contact with the dean of this faculty will ease the process of organization. The design(s) will be used for the workshop(s), interactions with stakeholders and partners, and for external communication purposes.

Method(s): *Meetings with designer(s) and the production of 3D-impressions and maps*
Deliverable(s): *Sketch Design I (3D-impressions and maps) in electronic format and on paper*

Task I.4 Interaction with Key Stakeholders and (Potential) Partners

The results of the feasibility scan and sketch design I will be discussed in a workshop setting in Jordan. Input of key-stakeholders related to results of the scan, functions for the campus, opportunities for job creation and educational opportunities, connectivity to the environment and the design will shape the GFC concept in the specific context and is invaluable for the support of stakeholders. Participants for the workshops may include but are not limited to politicians, policy makers, influencers, decision makers, potential users for the campus, Mafraq citizens, Civil-Society organizations in Mafraq, grassroots organization in Mafraq, experts on our five sectors, potential impact investors and (potential) partners. Focus meetings will be held with specific groups to ensure input from all. GreenfieldCities aims to work with partners in key areas of expertise and form them in working groups per sector so that they can provide key expertise for specific themes. We also discuss the results with (potential) partners and try to bind them to the pilot-project.

Participants: *Key stakeholders that can contribute to the realization and success of the pilot-project.*
Duration: *Full day*
Location: *Jordan, suggestion: Dutch embassy in Amman*

Goals workshop(s):

- Inform about project and progression
- Test key elements of feasibility and design
- Generate new ideas for next stages and embed concept in the specific context
- Find variants for the design and key variables for the feasibility calculation model
- Create enthusiasm, commitment and support
- Generate input for the risk-analysis
- Create working groups around specific areas and specific knowledge that can advise GFC during the in-depth feasibility stage of this study.
- Gain the "user" perspective to get a better understanding of the user needs.

Method(s): *Workshops, focus meetings, working groups and meetings with (potential) partners*
Deliverables: *Workshop slides, report summarizing the results of the workshop(s) and focus meetings, and Loi's, MoU's or term sheets from partners*

Stage II: In-Depth Feasibility Study Including Impact Assessment

In stage II, GreenfieldCities:

1. Performs an in-depth feasibility study
2. Assesses the impact on key aspects of the pilot project
3. Makes a sketch design II
4. Organizes a *Conference of the Enabling Parties*

The working groups as created during the workshop(s) in stage I will be actively involved in tasks 1 and 3 of this stage.

Task II.1: In-Depth Feasibility Study

The elements of the in-depth feasibility study are similar to the ones of the *feasibility scan* of stage 1, but this study is more detailed. It will also be analyzed what the financial feasibility is for two or three development scenarios and it will be estimated what the overall scalability of the campus is. The interest of impact investors and/or private partners and/or public partners to invest in the next phases of the project should be tested in this stage. It is furthermore assessed how Jordanian and EU values can be aligned and how the political support can be secured in Jordan and the Netherlands.

Method(s): *Desk research, interviews and focus meetings, model calculations*
Deliverable(s): *Assessment feasibility, program of requirements and LoIs or MoUs of investors for development funding*

Task II.2: Impact Assessment

The impact of the campus will be assessed based on project-output metrics. A calculation model will be developed to facilitate the optimization of campus parameters and variables (such as functions from the program of requirements) and to facilitate the assessment of impacts on relevant aspects. These include:

- *SDG 8:* Economic output parameters such as investments, growth, the number of jobs, increase of wages, and improvements in our five sectors, such as an improvement in agricultural production methods, avoided costs for reception and integration of migrants in EU/NL
- *SDG 4:* Effect of education on employability and problem-solving of Jordanian issues
- *SDG 13:* Effect of the climate demonstration: environmental output parameters such as GHGs and other avoided fossil fuel emissions and including:
    - Renewable energy production and energy savings (SDG 7)
    - Reduction of used water (SDG 6)
- *SDG 5:* Ratio female/male students; employed women/men
- *SDG 16:* Trust in Campus administration

A rough order magnitude projection of this assessment will be made assuming the development scenarios used under Task II.1

Method(s): *Desk research, surveys and model calculations*
Deliverable(s): *Impact assessment report and program of requirements for most feasible option with the largest impact*

Task II.3: Sketch Design II

Based on the program of requirements and sketch design I an improved sketch design will be made by a design expert and functions as input for discussions with stakeholders and partners.

Method(s): *Meetings with designer(s) and the production of 3D-impressions and maps*
Deliverable(s): *Sketch design II (3D-impressions and maps) in electronic format and on paper*

Task II.4: Conference of Enabling Parties

At the end of stage 2 an international *Conference of enabling parties* will be organized. At the conference the results of the study will be presented and discussed for a wider audience. Formal signing of key MoUs, LoIs or contracts could be part of the conference.

Duration: *Half a day + evening.*
Location: *Amman*
Method(s): *Conference and meetings*
Deliverables: *Conference slides and a report summarizing the results of the conference*

4. Format Deliverables Feasibility Study

The deliverables from stage I and stage II of the feasibility study will be synergized in a feasibility end Report, an impact end Report, a campus development plan and later a feasibility update (see Table 2). These deliverables need to convey the conclusions of the feasibility study to stakeholders and offer clear steps for the next phases of the pilot-project. As the feasibility phase progresses, the (nature of the) deliverables may slightly change, but the goals and the scope for the feasibility study remain the same.

Table 2: Proposed deliverables feasibility study

Deliverable title	type/content	target group	publ. date	format	language
Feasibility end Report	comprehensive, high level of confidence feasibility info	Broader stakeholder group	t+9 months	doc,ppt, xls	eng
SDG Impact Annex	specific, high level of confidence feasibility info	Broader stakeholder group	t+9 months	ppt, xls	eng
Campus Development Plan	specific, high level of confidence feasibility info	Broader stakeholder group	t+9 months	ppt, xls	eng
Feasibility update	summary of feasibility report	Broader stakeholder group	t+10 months	video,www	eng, nl, ar.

5. Organization and Team for the Feasibility Study

The feasibility study is going to be performed by a team of Dutch, Syrian and Eritrean nationals that will be partly based in Arnhem, The Netherlands and partly in Mafraq, Jordan.

Team GFC NL:

1. *Mr. Joris Benninga* — Founder and Chief Executive Officer
2. *Mr. Arie van Beek* — Founder and Chief Sustainability Officer
3. *Mr. Mohamad Hassoun* — IT Manager
4. *Mr. Wasim Othman* — Marketing Manager
5. *Mr. Salim Nouri* — Medior Researcher, Liaison Officer
6. *Mr. Nahom Tesfamichael* — Finance and Administration Manager

Team GFC JOR:

1. *Mr. Hedzer Roodenburg Vermaat* — Country Director Jordan
2. *Ms. Syrian or Jordanian national* — Research Officer

The feasibility study covers a wide area of technical and non-technical issues both in the Netherlands and in Jordan. A successful study requires senior knowledge and experience in executing feasibility and project development work, as well as in public sector and private sector negotiations and deal making. GFC is well positioned to take care of the overall organization of the feasibility study. Specialized expertise will be hired, when necessary such as design expertise, cost estimation expertise and legal expertise.

For every collaboration that GFC concludes related to Jordan services or vendors, the organization applies a “local first” policy which entails that Mafraq town is the first place to search for expertise, service providers, partners in our five sectors, suppliers and more. Only if we cannot secure the adequate price/quality ratio in Mafraq, we select partners in Amman or Irbid, and later in The Netherlands and other EU member states. The Dutch team will consist mostly of talented (Syrian) refugees with adequate qualifications to carry out tasks and activities related to IT, content production, marketing, finance, engineering and administration. The overall management of the feasibility study will be in hands of Mr. Joris Benninga and Mr. Arie van Beek with Mr. Hedzer Roodenburg Vermaat as the local manager in Mafraq. Mr. Hedzer Roodenburg Vermaat has worked and lived for two years in Jordan and has developed and managed projects for UNHCR, VNG-I and the City of Amsterdam. The team in Mafraq furthermore consists of a small team with research, external relations and communication responsibilities. Mr. Joris Benninga and Mr. Arie van Beek have a track record in high-level consultancy, hands-on project development and setting up big and complex project organizations. Mr. Joris Benninga’s focus will be on economic impact and private

partners, while Mr. Arie van Beek's focus will be on sustainability and public partners. More information about them is presented in their detailed CVs in Annex C.

6. Partners

The GFC field trips in the past months have resulted in a good network. Several partner companies and individuals have been identified that can help us to develop the pilot-project. However, new partnerships will be concluded as well during the feasibility phase as the willingness to collaborate, support and commit to the pilot-project has to be tested. To enable us to deliver the required quality in the key elements of the feasibility scan and in-depth feasibility study we cooperate with Jordanian and Dutch partners. For each element we search for (scientific) experts to advice or supervise relevant GFC team members. We have already developed good partnerships with:

- Wageningen University & Research (Agriculture and water)
- Alliander (Energy)
- Radboud U/MC (healthcare, ICT and linguistics)
- 1 Civil Military Interaction Commando (Netherlands MoD).

This list is not exhaustive and not exclusive (see also Annex B). We have an excellent network with other universities and will use it if necessary (Leiden University and Technical University of Delft).

Jordanian partners include:

- Al-Al Bayt University
- Mafraq KHBT Special Economic Zone
- EDAMA, Jordan Sustainability Agency
- Jordan Green Building Council.

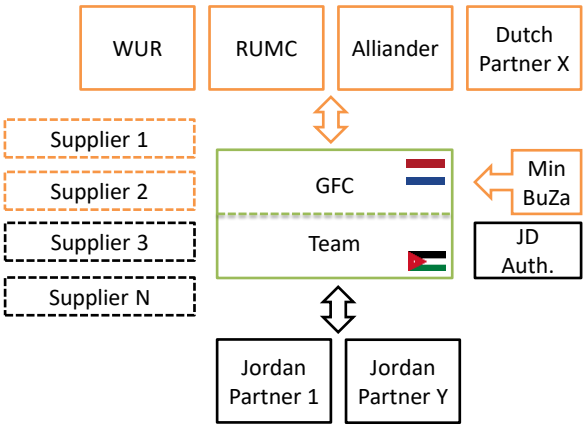


Figure 4 Schematic overview the Feasibility study project organization.

The pop-up approach enables us to do a substantial part of the design work in the Netherlands together with Dutch partners and preferably Dutch suppliers. Naturally the Dutch GFC branch will bring in the Jordanian and refugee perspective which is not only important for local feasibility aspects and design requirements, but they also can bring in a "user-of-the-campus" perspective.

To give the feasibility study the depth it needs and the required accuracy, we will also cooperate with (potential) suppliers. Making a realistic design and having the right cost estimates is key for the follow-up phase: financial close and implementation. Potential suppliers include:

- De Meeuw (key player in pop-up buildings)
- Alfen (key player in building the electricity grid of the future)
- Wind Energy Solutions
- Deerns Consulting Engineers

Suppliers with whom we seek to cooperate will be invited to participate through Requests for Information and Requests for Quotes, and/or beauty contests. Last not least, the relationship and communication with the Ministry of Foreign Affairs is key for the success of this study and for its follow-up. Not only in the Ministry's role as sponsor and expert in the field of Jordanian affairs but also in the role of facilitating to unlock the (public) network of key Jordanian decision makers; more specifically they can help shape the relationship with Jordanian authorities. In addition, they can help find the right partners and/or suppliers in Jordan.

We propose an advisory committee to be formed to maximize the quality of the study both in its content and in its impact. The frequency of the meetings of this advisory committee can be determined during the kick-off meeting of the study.

7. Communication during the Feasibility Phase

Communication with all stakeholders and partners is crucial for the success of this study, for its impact and for GreenfieldCities in general (see Figure 5). Therefore the GFC team will develop and deploy different forms of communication:

1. Highlights of the gathered information and reached milestones will be publicly shared with a broader stakeholder group on the News items section on the GreenfieldCities website. The website, a bi-weekly news update and monthly newsletter will keep them informed.
2. For more financially interested stakeholders, a monthly financial report will be produced, allowing to keep track of progress versus spending.
3. Personal interactions with key stakeholders and (potential) partners are essential for proper partnership building. They will therefore regularly be visited for face-to-face meetings.
4. It is aimed to foster online communication and support collaboration between GreenfieldCities and 'established' partners through an online communication platform that can be accessed through a 'login' function on the website or a platform with the required functionality. This platform will be used for ideas and information sharing, planning and proper filing of relevant documents with the overall goals to foster effective collaboration, to stimulate working groups and fresh input.

Figure 5 Before … and after: the importance of communicating progress.

While making progress with the study, levels of confidence on the possible impact of the approach chosen will increase. If findings point towards potentially substantial impact in curbing the migration crisis, we propose the Ministry of Foreign Affairs to consider jointly organizing an international conference with key EU member states, the EU itself and the "Region" as target group. The Minister for Foreign Trade and Development Cooperation could be the host and might deliver a key note address to this conference.

8. Budget and Timing

At the time of writing of this document we estimate the necessary investment to construct and commission the pop-up phase (250 jobs) of the Mafraq Clean Tech Campus at around €5 million. This amount is based on high level market research and informal quotes by prospect suppliers. A budget estimation of the in-depth feasibility study for this investment is given in Table 3.

Table 3 Budget summary and timing of activities and deliverables.

	Activities	Rate (€/hr) →	Internal	3rd party services			3rd party products	
		Function →	Costs	hrs	Rate	Amount	Amount	total
Exploration and Interaction (stage I)		Deliv. month ↓	€ ↓	hr ↓	€/hr ↓	€ ↓	€ ↓	€ ↓
	I.1 Stakeholder analysis	3	€ 11.759	0	€140	€ 0	€ 0	€ 11.759
	I.2 Feasibility scan	3	€ 35.926	40	€140	€ 5.600	€ 0	€ 41.526
	I.3 Sketch Design	3	€ 5.740	40	€140	€ 5.600	€ 0	€ 11.340
	I.4 Stakeholder interaction	3	€ 20.189	0	€140	€ 0	€ 2.500	€ 22.689
	Preparing Stage II	3	€ 3.244	0	€140	€ 0	€ 0	€ 3.244
sub-total			76.858			11.200	2.500	90.558
In Depth Feasibility & Impact Assessment (stage II)		Deliv. month ↓	€ ↓	hr ↓	€/hr ↓	€ ↓	€ ↓	€ ↓
	II.1 In-Depth Feasibility Study	9	€ 68.908	80	€140	€ 11.200	0	€ 80.108
	II.2 Impact Assessment	9	€ 41.389	40	€140	€ 5.600	0	€ 46.989
	II.3 Sketch Design II	9	€ 5.740	80	€140	€ 11.200	0	€ 16.940
	II.4 Conference of enabling parties	10	€ 22.239	0	€140	€ 0	5.000	€ 27.239
sub-total			138.276	200		28.000	5.000	€171.276
GFC Organization and Supporting Activities		Deliv. month ↓	€ ↓	hr ↓	€/hr ↓	€ ↓	€ ↓	€ ↓
	Financial management	1-10	5.512		€140	0	3.000	8.512
	ICT	1-10	7.349		€140	0	15.000	22.349
	Marketing research & Communication	1-10	8.084		€140	0	10.000	18.084
	Partner/Impact Investor Search	1-10	6.614		€140	0	0	6.614
	Legal Advice	1-10	0		€140	8.400	0	8.400
	Other	1-10	23.065		€140	0	50.000	73.065
sub-total			50.623	60		8.400	78.000	€137.023
TOTAL FEASIBILITY / PILOT STUDY			€ 265.757	260	€ 0	€ 47.600	€ 85.500	€ 398.857

Tasks for which the broader GFC team does not have in-house capabilities will be outsourced. The applied hourly rates are derived from market conform salaries for the applied specializations and functions plus costs for overhead (office costs, insurances, pensions, support staff etc.). The hourly rate used for outsourced work is €140/hr. This rate is a low-end average for the different required specialisms. Other out of pocket costs line items are for travel and for establishing the Jordanian and Netherlands project organizations.

The total study budget is € 398.857. Annex A also provides a detailed overview of the projected activities and costs.

Figure 6 shows the two stage Gantt chart of the study and the approximate month in which deliverables need to be ready. The first stage will take 4 months, while the second stage will take 6 months. The stages after the study: bringing the project to financial close and the actual construction will take another 10 months. If all so-called decision gates down the road are passed successfully, the first phase of the campus could be built in 2 years' time.

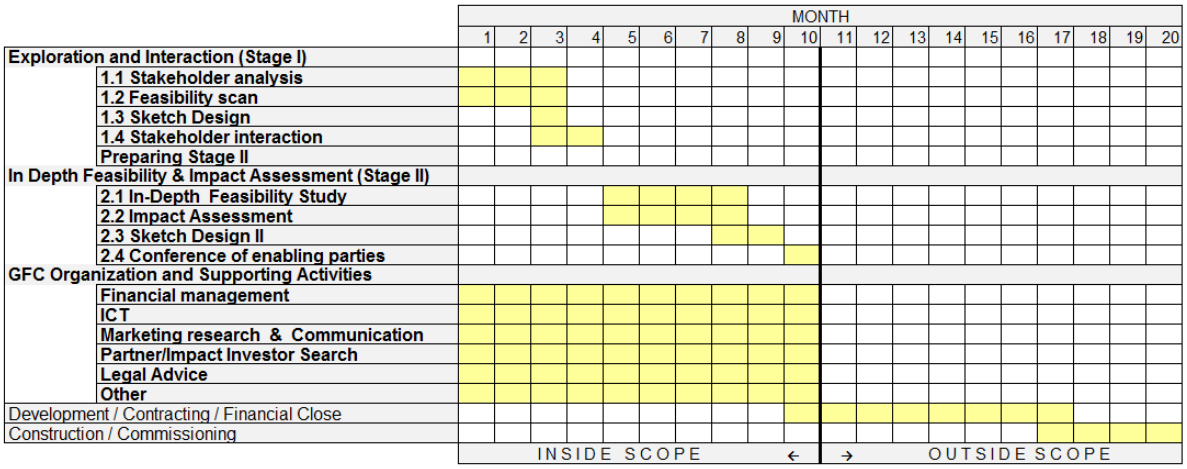


Figure 6 Gantt chart of the feasibility study.

Annex A Detailed work break down and budget

PROJECT FEASIBILTY / BUDGET ESTIMATION

Proj. name	**Mafraq Feasibility**
Owner	Stichting GreenfieldCities
Project #	2018001
Area	40.000m2, Mafraq, Jordan
Size	work, live and learn places for 200 people
Capex est	€ 5.000.000
Feasibility	€ 398.000
O&M est.	€300.000/yr
Responsible	Joris Benninga
Start	1-3-2018
End (st. 2.)	1-11-2018

function abbreviations

jrr= junior research officer
mdr= medior research officer
srr= senior research officer
fex= financial expert
cm= contract manager
arch= architect/designer
pm= project (construction) engineer/manager
pd= project director
alo= arabic liaison officer
mkt= marketeer
sust= sustainability expert
it- information technology expert

	Activities	Rate (€/hr) →	25	41	60	46	60	55	53	75	37	51	51	46	Internal	3rd party services			3rd party products	
		Function →	jrr	mdr	srr	fex	cm	arch	pm	pd	alo	mkt	sust	it	Costs	hrs	Rate	Amount	Amount	total
Exploration and Interaction (stage I)		Deliv. month ↓	hr ↓	hr ↓	hr ↓	hr ↓	hr ↓	hr ↓	hr ↓	hr ↓	hr ↓	hr ↓	hr ↓	hr ↓	€ ↓	hr ↓	€/hr ↓	€ ↓	€ ↓	€ ↓
	I.1 Stakeholder analysis	3	60	60	60	4	0	0	16	4	30	16	4	16	€ 11.759	0	€140	€ 0	€ 0	€ 11.759
	Jordan: identification and quick scan		30	30	30	2			8	2	30	8	2	8	€ 6.431		€140	€ 0		€ 6.431
	NL and EU: identification and quick scan		30	30	30	2			8	2		8	2	8	€ 5.328		€140	€ 0		€ 5.328
	I.2 Feasibility scan	3	176	176	176	22	0	40	22	11	88	44	40	22	€ 35.926	40	€140	€ 5.600	€ 0	€ 41.526
	Economical/Jobs		16	16	16	2			2	1	8	4	2	2	€ 2.983		€140	€ 0		€ 2.983
	Education		16	16	16	2			2	1	8	4	2	2	€ 2.983		€140	€ 0		€ 2.983
	Legal /Regulatory		16	16	16	2			2	1	8	4	2	2	€ 2.983	40	€140	€ 5.600		€ 8.583
	Spatial / Site		16	16	16	2		40	2	1	8	4	2	2	€ 5.188		€140	€ 0		€ 5.188
	Social /Users		16	16	16	2			2	1	8	4	2	2	€ 2.983		€140	€ 0		€ 2.983
	Technological		16	16	16	2			2	1	8	4	2	2	€ 2.983		€140	€ 0		€ 2.983
	Financial		16	16	16	2			2	1	8	4	2	2	€ 2.983		€140	€ 0		€ 2.983
	Sustainability		16	16	16	2			2	1	8	4	20	2	€ 3.892		€140	€ 0		€ 3.892
	EU Values		16	16	16	2			2	1	8	4	2	2	€ 2.983		€140	€ 0		€ 2.983
	Risks		16	16	16	2			2	1	8	4	2	2	€ 2.983		€140	€ 0		€ 2.983
	Scalability		16	16	16	2			2	1	8	4	2	2	€ 2.983		€140	€ 0		€ 2.983
	I.3 Sketch Design	3	8	8	8	0	0	40	40	0	0	8	0	0	€ 5.740	40	€140	€ 5.600	€ 0	€ 11.340
	Briefing 1.1, and 1.2 findings to designers		4	4	4			20	20			4			€ 2.870	20	€140	€ 2.800		€ 5.670
	Developing the sketch design		4	4	4			20	20			4			€ 2.870	20	€140	€ 2.800		€ 5.670
	I.4 Stakeholder interaction	3	40	40	40	0	0	0	64	64	40	80	10	20	€ 20.189	0	€140	€ 0	€ 2.500	€ 22.689
	Prepare workshop plan		8	8	8				16	16	8	16	2	4	€ 4.448		€140	€ 0		€ 4.448
	Shortlist participants		8	8	8				8	8	8	16	2	4	€ 3.423		€140	€ 0		€ 3.423
	Test workshop plan with shortlisted stakeholders		8	8	8				8	8	8	16	2	4	€ 3.423		€140	€ 0		€ 3.423
	Execute workshop		8	8	8				16	16	8	16	2	4	€ 4.448		€140	€ 0	€ 2.500	€ 6.948
	Analyze results and report		8	8	8				16	16	8	16	2	4	€ 4.448		€140	€ 0		€ 4.448
	Preparing Stage II	3	8	8	8	4	0	0	16	16	0	0	0	0	€ 3.244	0	€140	€ 0	€ 0	€ 3.244
	Refine Phase 2 planning		8	8	8	4			16	16					€ 3.244		€140	€ 0		€ 3.244
sub-total			292	292	292	30	0	80	158	95	158	148	54	58	76.858			11.200	2.500	90.558
In Depth Feasibility & Impact Assessment (stage II)		Deliv. month ↓	hr ↓	hr ↓	hr ↓	hr ↓	hr ↓	hr ↓	hr ↓	hr ↓	hr ↓	hr ↓	hr ↓	hr ↓	€ ↓	hr ↓	€/hr ↓	€ ↓	€ ↓	€ ↓
	II.1 In-Depth Feasibility Study	9	330	330	330	44	80	60	44	22	132	44	80	44	€ 68.908	80	€140	€ 11.200	0	€ 80.108
	Economical/Jobs		30	30	30	4			4	2	12	4	4	4	€ 5.364		€140	€ 0		€ 5.364
	Education		30	30	30	4			4	2	12	4	4	4	€ 5.364		€140	€ 0		€ 5.364
	Legal /Regulatory		30	30	30	4			4	2	12	4	4	4	€ 5.364	60	€140	€ 8.400		€ 13.764
	Spatial / Site		30	30	30	4		60	4	2	12	4	4	4	€ 8.671	20	€140	€ 2.800		€ 11.471
	Social /Users		30	30	30	4			4	2	12	4	4	4	€ 5.364		€140	€ 0		€ 5.364
	Technological		30	30	30	4			4	2	12	4	4	4	€ 5.364		€140	€ 0		€ 5.364
	Financial / Investor Appetite		30	30	30	4	80		4	2	12	4	4	4	€ 10.141		€140	€ 0		€ 10.141
	Sustainability		30	30	30	4			4	2	12	4	40	4	€ 7.183		€140	€ 0		€ 7.183
	EU Values vs JoD values and RoL		30	30	30	4			4	2	12	4	4	4	€ 5.364		€140	€ 0		€ 5.364
	Risks		30	30	30	4			4	2	12	4	4	4	€ 5.364		€140	€ 0		€ 5.364
	Scalability		30	30	30	4			4	2	12	4	4	4	€ 5.364		€140	€ 0		€ 5.364
	II.2 Impact Assessment	9	210	210	210	28	0	0	28	14	84	28	104	28	€ 41.389	40	€140	€ 5.600	0	€ 46.989
	Economical/Jobs (SDG 8)		30	30	30	4			4	2	12	4	4	4	€ 5.364		€140	€ 0		€ 5.364
	Education to employability (SDG 4)		30	30	30	4			4	2	12	4	4	4	€ 5.364		€140	€ 0		€ 5.364
	Climate, Energy and Water (SDG 13, 6 and 7)		30	30	30	4			4	2	12	4	80	4	€ 9.204		€140	€ 0		€ 9.204
	Gender, female participation rate (SDG 5)		30	30	30	4			4	2	12	4	4	4	€ 5.364		€140	€ 0		€ 5.364
	Institutions, Trust in GFC (SDG 16)		30	30	30	4			4	2	12	4	4	4	€ 5.364	40	€140	€ 5.600		€ 10.964
	Overall Region of Origin Impact Potential		30	30	30	4			4	2	12	4	4	4	€ 5.364		€140	€ 0		€ 5.364
	Overall Enabling Environment Creation		30	30	30	4			4	2	12	4	4	4	€ 5.364		€140	€ 0		€ 5.364
	II.3 Sketch Design II	9	8	8	8	0	0	40	40	0	0	8	0	0	€ 5.740	80	€140	€ 11.200	0	€ 16.940
	Briefing 1.3, 2.1 and 2.2 findings to designers		4	4	4			20	20			4			€ 2.870	40	€140	€ 5.600		€ 8.470
	Developing the sketch design		4	4	4			20	20			4			€ 2.870	40	€140	€ 5.600		€ 8.470
	II.4 Conference of enabling parties	10	40	40	40	0	0	0	80	80	40	80	10	20	€ 22.239	0	€140	€ 0	5.000	€ 27.239
	Prepare conference plan		8	8	8				16	16	8	16	2	4	€ 4.448		€140	€ 0		€ 4.448
	Shortlist participants		8	8	8				16	16	8	16	2	4	€ 4.448		€140	€ 0		€ 4.448
	Test conference plan with shortlisted stakeholders		8	8	8				16	16	8	16	2	4	€ 4.448		€140	€ 0		€ 4.448
	Execute conference		8	8	8				16	16	8	16	2	4	€ 4.448		€140	€ 0	€ 5.000	€ 9.448
	Analyze results and report		8	8	8				16	16	8	16	2	4	€ 4.448		€140	€ 0		€ 4.448
sub-total			588	588	588	72	80	100	192	116	256	160	194	92	138.276	200		28.000	5.000	€171.276
GFC Organization and Supporting Activities		Deliv. month ↓	hr ↓	hr ↓	hr ↓	hr ↓	hr ↓	hr ↓	hr ↓	hr ↓	hr ↓	hr ↓	hr ↓	hr ↓	€ ↓	hr ↓	€/hr ↓	€ ↓	€ ↓	€ ↓
	Financial management	1-10	0	0	0	120	0	0	0	0	0	0	0	0	5.512		€140	0	3.000	8.512
	Financial admin					40									€ 1.837		€140			€ 1.837
	Financial advice					40									€ 1.837		€140			€ 1.837
	Financial audits					40									€ 1.837		€140		€ 3.000	€ 4.837
	ICT	1-10	0	0	0	0	0	0	0	0	0	0	0	160	7.349		€140	0	15.000	22.349
	Internal IT, pc's, network, connectivity, office software													80	€ 3.674		€140		€ 7.500	€ 11.174
	Application development													80	€ 3.674		€140		€ 7.500	€ 11.174
	Marketing research & Communication	1-10	0	0	0	0	0	0	0	0	0	160	0	0	8.084		€140	0	10.000	18.084
	Content development											80			€ 4.042		€140		€ 5.000	€ 9.042
	Channel costs											40			€ 2.021		€140		€ 5.000	€ 7.021
	Marketing research, analysis, strategizing											40			€ 2.021		€140			€ 2.021
	Partner/Impact Investor Search	1-10	0	0	0	80	0	0	0	0	80	0	0	0	6.614		€140	0	0	6.614
	Pitch development and pitching										80				€ 2.940		€140			€ 2.940
	Financial model development					80									€ 3.674		€140			€ 3.674
	Legal Advice	1-10	0	0	0	0	0	0	0	0	0	0	0	0	0		€140	8.400	0	8.400
	Notary, Tax, Corporate, etc.															60	€140	€ 8.400		€ 8.400
	Other	1-10	0	0	0	0	0	0	180	180	0	0	0	0	23.065		€140	0	50.000	73.065
	Travel														€ 0		€140		€ 15.000	€ 15.000
	Jordan office, equipment, local transport																€140		€ 30.000	€ 30.000
	Representation														€ 0		€140		€ 5.000	€ 5.000
	Project management								180	180					€ 23.065		€140			€ 23.065
sub-total			0	0	0	200	0	0	180	180	80	160	0	160	50.623	60		8.400	78.000	€137.023
TOTAL FEASIBILITY / PILOT STUDY			880	880	880	302	80	180	530	391	494	468	248	310	€ 265.757	260	€ 0	€ 47.600	€ 85.500	€ 398.857
			jrr	mdr	srr	fex	cm	arch	pm	pd	alo	mkt	sust	it						

Annex B Longlist of Partners, Prospect Suppliers and -Investors

Partners

- Netherlands Ministry of Foreign Affairs
- Radboud University Medical Center
- Wageningen University & Research
- Alliander
- TenneT
- Stillare Foundation
- Gemeente Arnhem
- Gemeente Nijmegen
- 1 CMI Commando, NL MoD
- InEnergie BV
- World Waternet, Amsterdam
- The Hague Centre for Strategic Studies, the Hague
- Work4water, the Hague-Syria
- Jordan Green Building Council
- EDAMA Jordanian Sustainability Agency
- Jordanian Investment Commission
- Mafraq KHBT Special Economic Zone
- Mafraq Governorate
- Al-Al Bayt University, Mafraq, Jordan
- EU, DG NEAR and EU Delegation Amman, Jordan
- Eco Consult, Amman Jordan
- IDECO, Irbid, Jordan
- Innogy, Germany
- GIZ Germany
- Python Software Foundation, USA
- Box.org, USA-UK
- Allyourmedia BV

Prospect Suppliers

- Deerns Consulting Engineers
- De Meeuw Future Builders
- Sendec Constructions
- BAM Group
- VDL Group
- Gieling Consulting
- Alfen TBI
- Pure Water Well
- WES Wind Energy Solutions
- Siemens, The Netherlands
- Petra Engineering, Mafraq/Amman, Jordan
- Florentine Visser Arch., Amman, Jordan
- IKEA/IKEA Foundation
- Remondis, Germany

Prospect Investors/funders with already ongoing discussions

(In between brackets if they already contributed)

- TenneT (€20.000)
- Gemeente Arnhem (approx. €40.000)
- Gemeente Nijmegen
- Wageningen University & Research (€30.000)
- Marion Rockefeller / Flowfunding.org ($10.000)
- Box.org (approx.€3000/yr in kind)
- Techsoup.org (approx.€3000/yr in kind)
- EU Commission
- EU SME programs
- GIZ
- Ikea Foundation
- Boudewijn Poelmann / DOEN
- Maatschappelijke Alliantie
- Adessium
- GoldSchmeding Foundation
- Open Society Foundations
- NL Ministry of Social Affairs and Work
- FMO
- Fred Foundation
- Shell Foundation
- Rockefeller Foundation
- USAID
- Alliander
- Unie van Waterschappen
- Sawiris Foundation
- Qatar Foundation
- Triodos Foundation
- Rabobank Foundation
- Rabo Development
- Private Donations (approx.€30.000)
- NL Ministry of Justice, COA-International

Annex C Key CVs

CV's can also be viewed online in the LinkedIn profiles:

Joris Benninga:	https://nl.linkedin.com/in/joris-benninga-69839a4
Arie van Beek:	https://www.linkedin.com/in/arie-van-beek-4466a583/
Hedzer Roodenburg Vermaat:	https://www.linkedin.com/in/hedzer-roodenburg-vermaat-b1615b75/