

Youth Business Campus Mafraq

Results MinBuZa Funded Feasibility Study "*Mafraq Campus Pilot Project
to Help Reduce Forced Migration*" & Way forward

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Contents

- Mission & Strategy GreenfieldCities
- Approach
- Stakeholder Analyses & Interaction
- Concept & Design
- Feasibility 6 Business Cases
- Impact
 - Perspective NL/EU
- Feasibility aspects
- Embeddedness and (political) support
- Way forward

Mission and Strategy



- *Create safe Sustainable Cities Together* as an approach to reduce push factors for migration in regions of origin (climate change, conflicts, ...)
- Minimum viable product (MVP): Youth Business Campus
- “Beach head” market to launch that product: Mafraq in Northern Jordan, a governorate close to the Southern Syrian border
- Make sure Jordan benefits most from this approach

Feasibility Study Approach

A.



Finding the most credible
road from A to B

B.



1. Collect information

4. Adapt, Plan,
Team Up,
Operationalize,
& Report

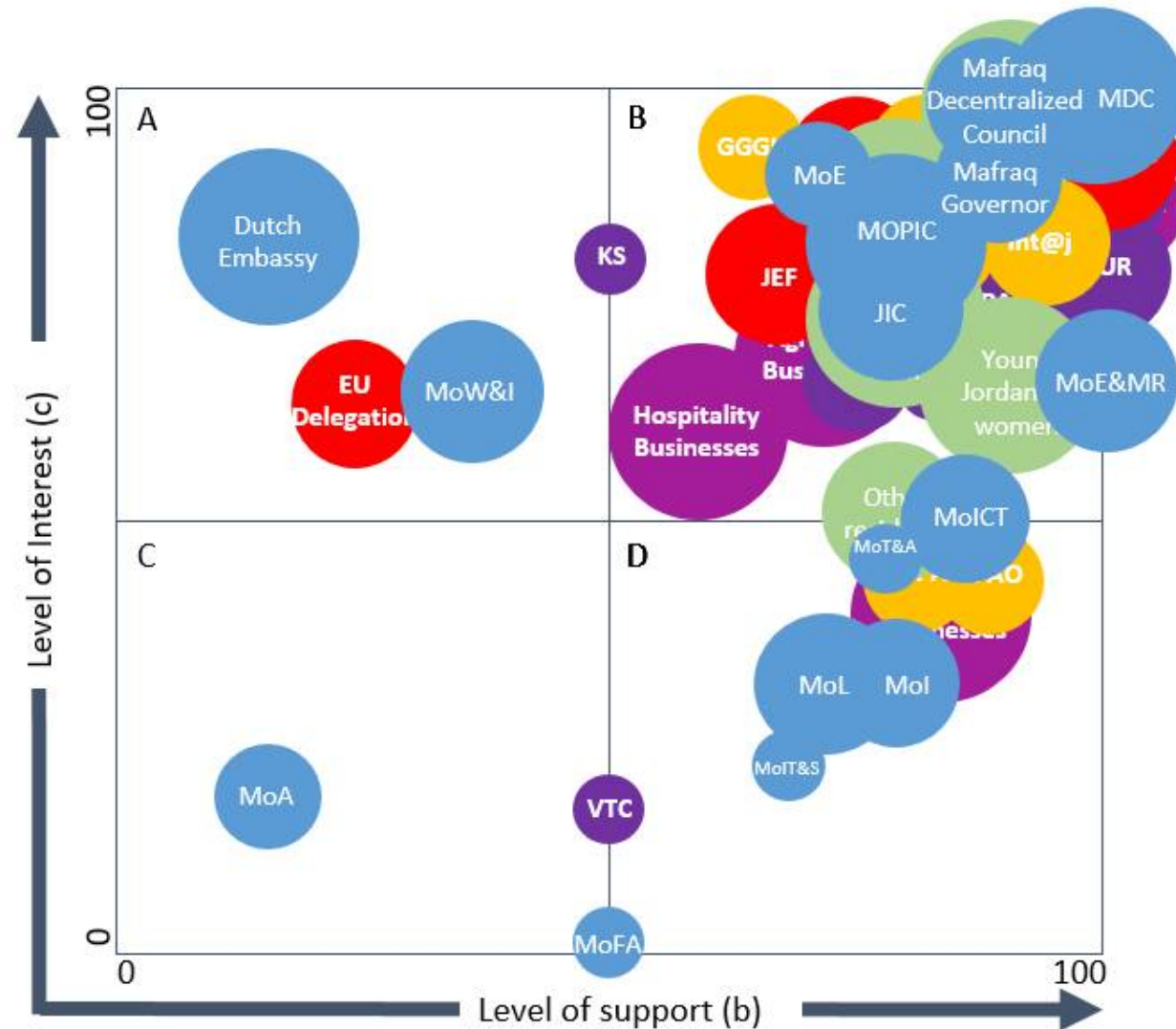
2. Analyze
&
Inspire

3. Solicit feedback

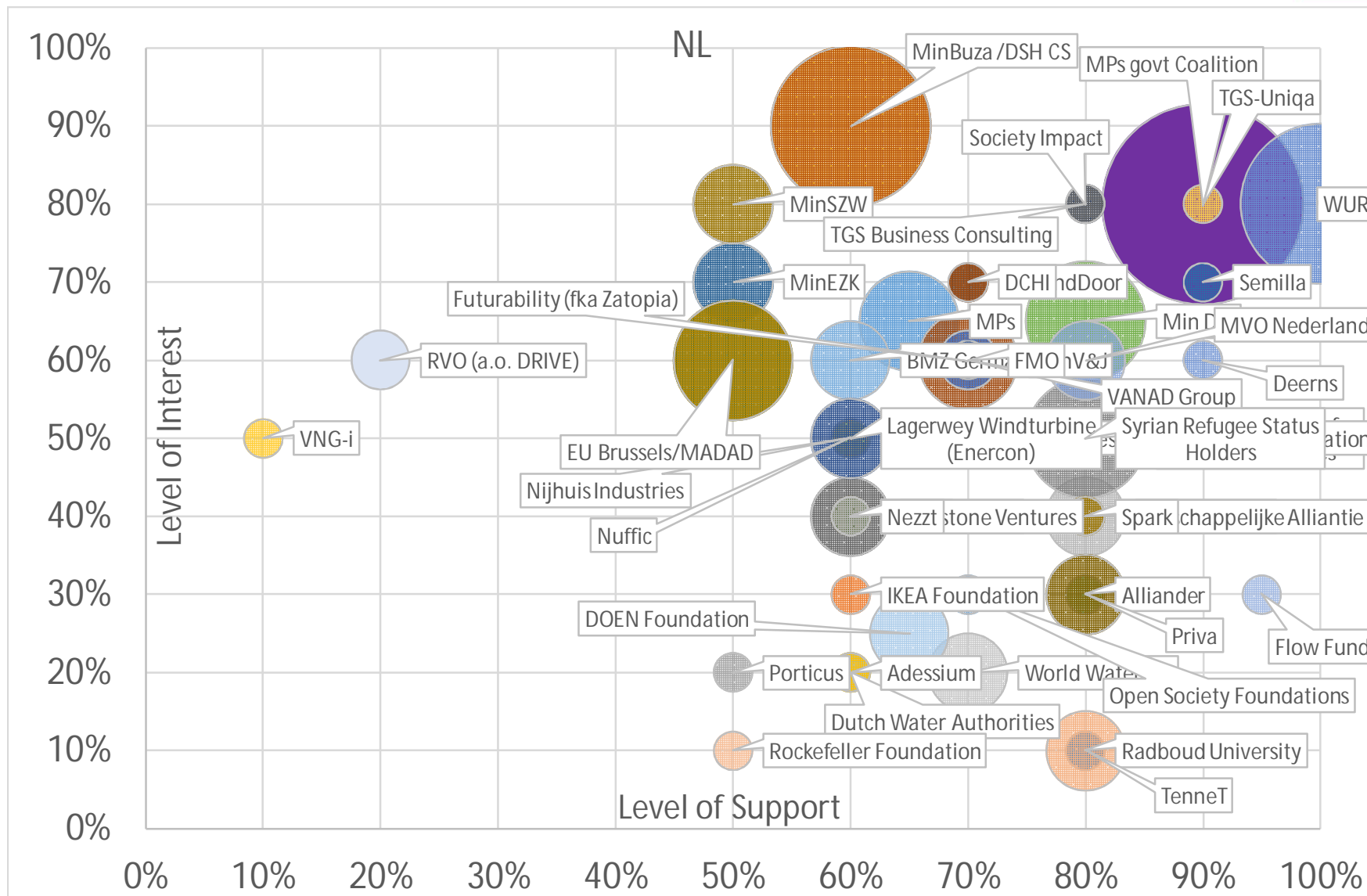


>> Conventional economic modelling: bottom line question asked
“Will you participate, rent office space, co-invest...?”

Stakeholder Analysis Jordan



Stakeholder Analysis: The Netherlands



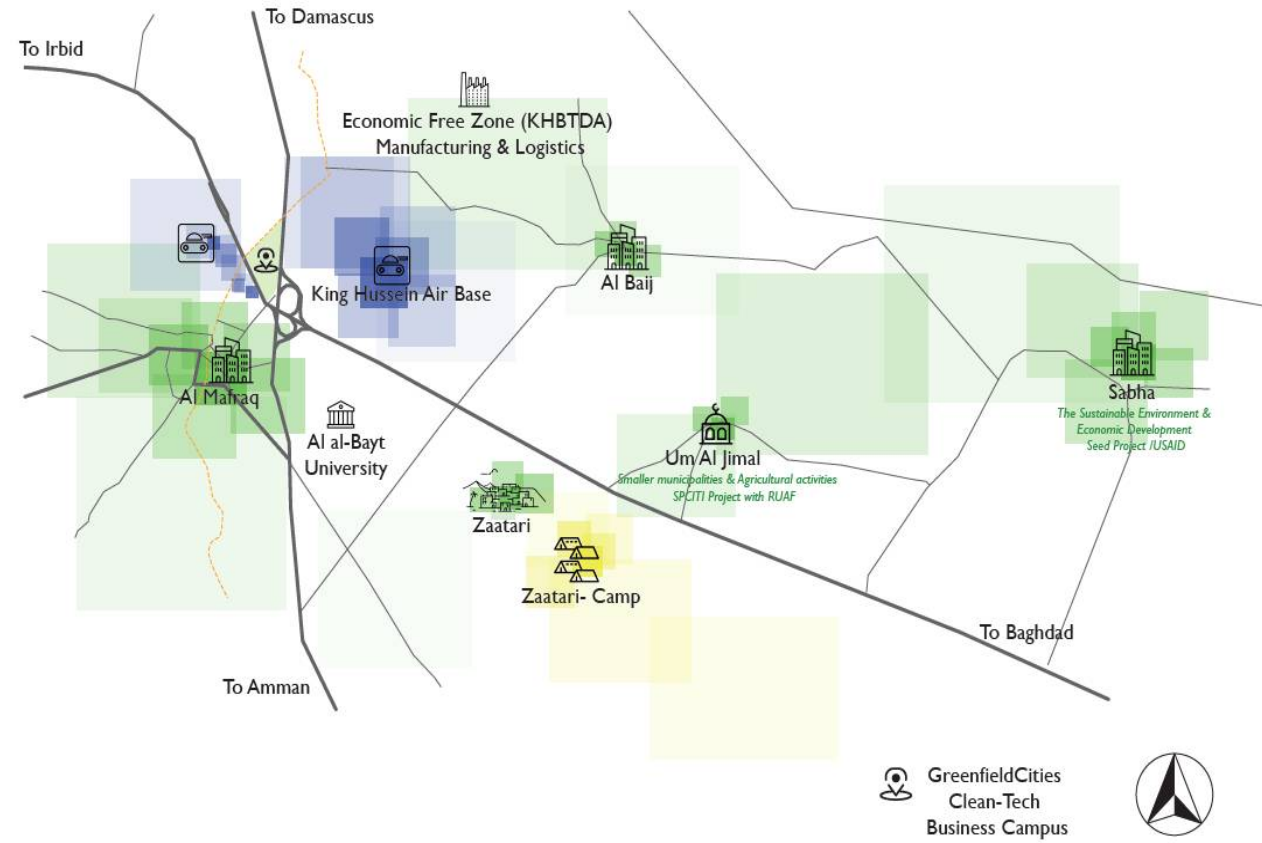


Midterm Workshop



Location: Mafraq Economic Free Zone

- The combination of factors is key for competitive advantages that the YBC offers and include:
 - Low land prices
 - High quality Infra for a bearable fee
 - One-stop-shop for permits and navigation of regulatory framework
 - High quality labor for an attractive price
 - Excellent education & training (on the job)
 - Stepping stone for regional Middle-East market



Concept Youth Business Campus



- Ensure sustainable living conditions in Mafraq
- A model to work for a long period (30-50yrs) on the biggest challenges & opportunities of Mafraq: water scarcity, food security, energy transition and economic value (jobs)
- Conditions for youth and private sector: build local capacity, demonstrate, raise awareness and market products and services
- Make youth of Mafraq proud, energetic and trustful for the future
- Start small, secure quick wins, and grow to ensure sustainability

Stages of development

2019

2020

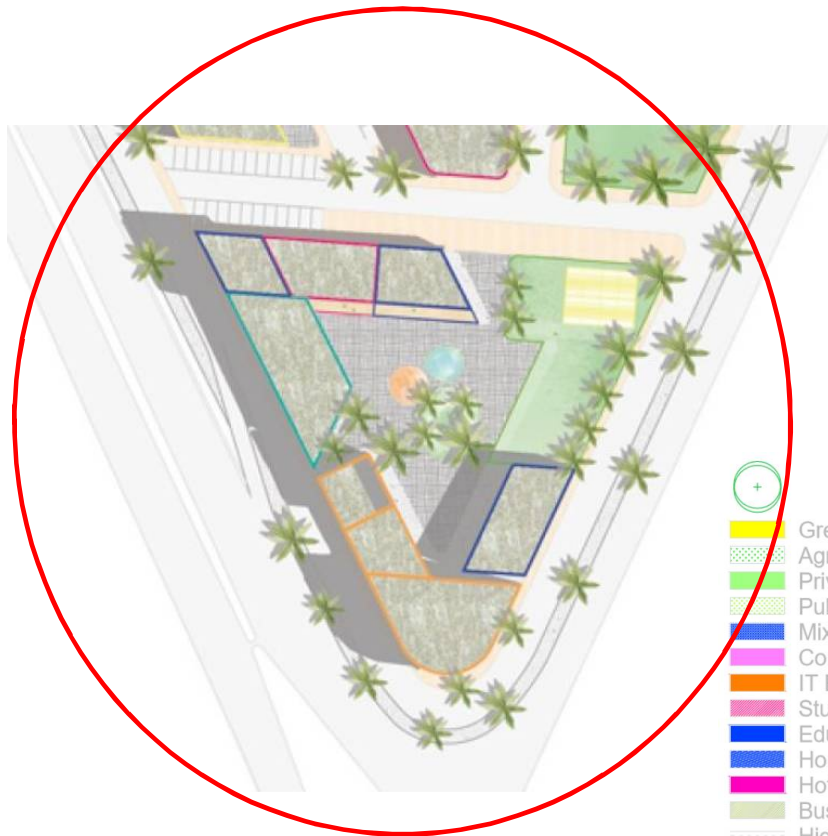
2021

2022

2023

2024

"Pop-Up" (100-250 people)



"Touch Base" (500-1000 people)



"Fully Developed" (1500-2500 people)

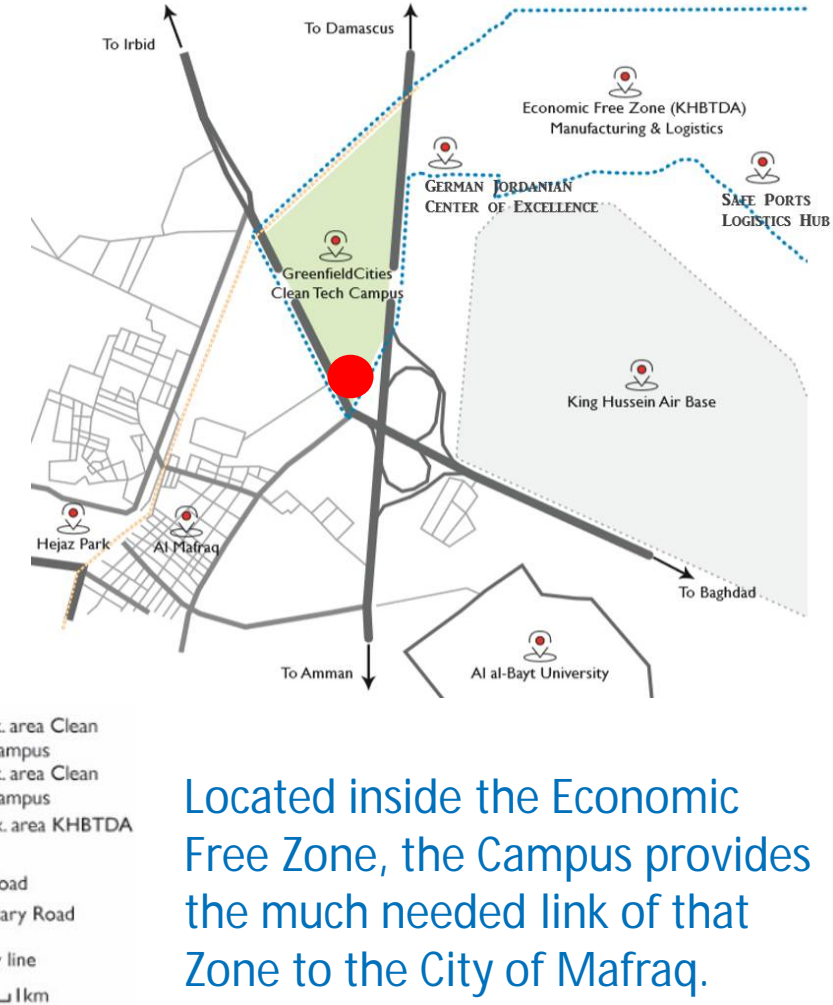


- Greenhouses
- Agriculture
- Private Green
- Public Parks
- Mixed use Education
- Commercials
- IT Education
- Studio's
- Education
- Housing mixed use
- Hotel
- Businesses
- Highway
- Hejaz Railwayline

Concept Youth Business Campus

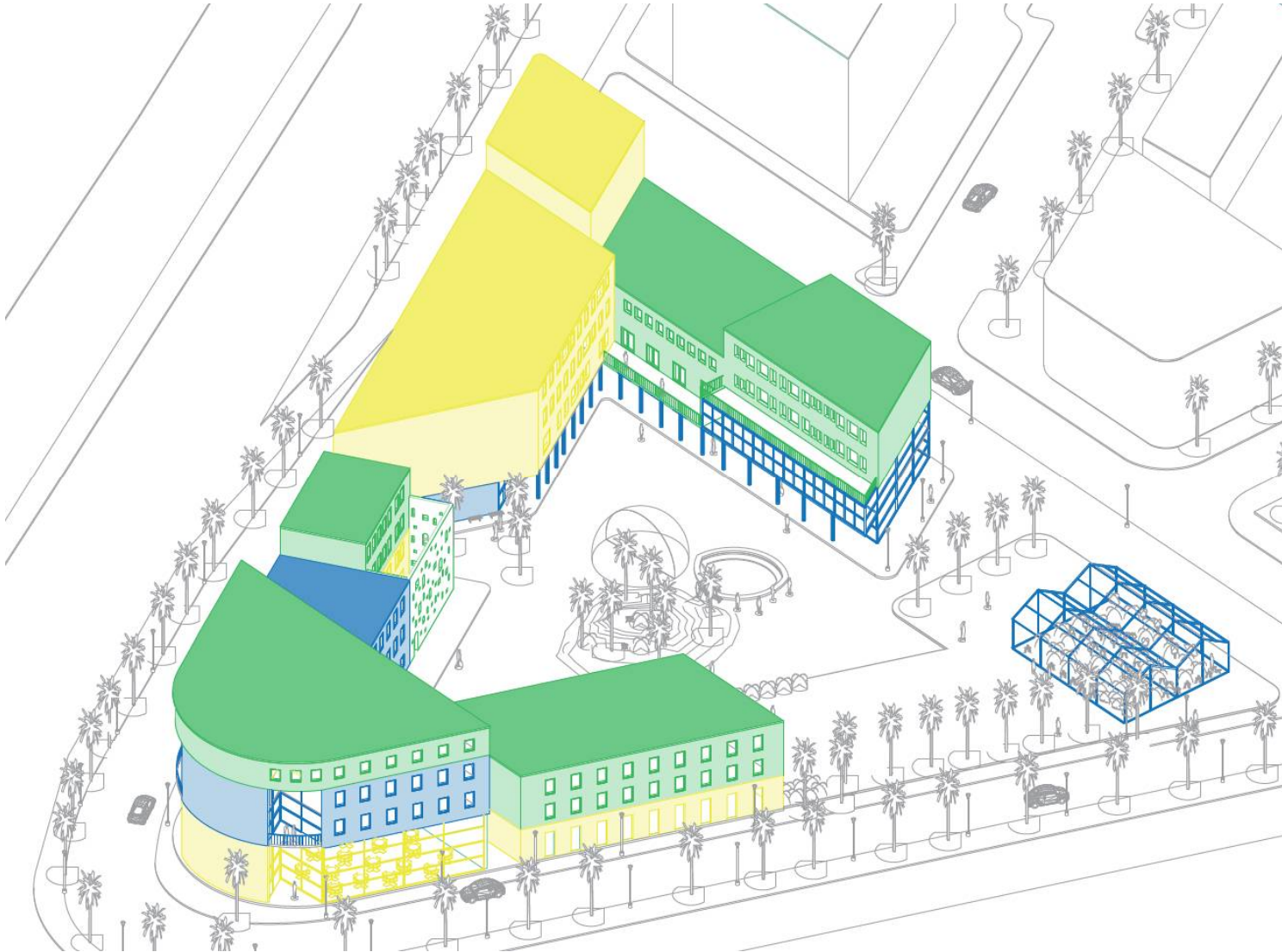


The **“Pop-Up”** of the **Youth Business Campus**, albeit small, immediately has a smart city feel. The neighborhood for 100-250 young people has buildings for living, learning and working and includes safe public space, especially for women



Located inside the Economic Free Zone, the Campus provides the much needed link of that Zone to the City of Mafrq.

Concept Youth Business Campus



Functions & Profile:

- Youth
- Gender equality (50% women/ 50% men)
- Representative Syrian participation (target 50-50)
- To live & recreate
- To learn for employment
- To work, reach high labor productivity, learn and grow

Six Credible Sector-Cases Identified



ICT



Energy



Hospitality



Construction



Agriculture



Water

Six Sectors on Campus



- Activities
 - Run hotel/hospitality
 - Educate/train staff
 - Secure gender sensitive place

- Partners
 - Landmark Hotels Amman
 - Luminus Education
 - Accor Hotels

- Activities
 - Launching client for affordable green building
 - SIP wall panel factory in Free Zone
 - Train builders & designers

- Partners
 - UNIQA, CD20
 - Mafrag Dev. Corp.
 - Atelier-Rijksbouwmeester

Hospitality & Women Oasis

ICT

- Activities
 - ICT training
 - National & int. Job placement

- Partners
 - Luminus, RBK.org
 - Orange Jordan
 - Nederland ICT

Agriculture

- Activities
 - Crop testing
 - Value adding-marketing
 - Pesticide & Water reduction
 - Train to implement

- Partners
 - Local farmers (coops)
 - NARC
 - WUR, PRIVA
 - New local COOP (EDSCO)



Construction

Energy

- Activities
 - Solar building integration
 - Demand reduction
 - Monitoring & reporting
 - New Energy Dev & service Co

- Partners
 - IDECO (local utility)
 - GIZ
 - Alliander

Water

- Activities
 - Rain water harvesting
 - Water storage
 - Grey water recycling (Agri)
 - Technology demo
 - Demand reduction
 - Business case development

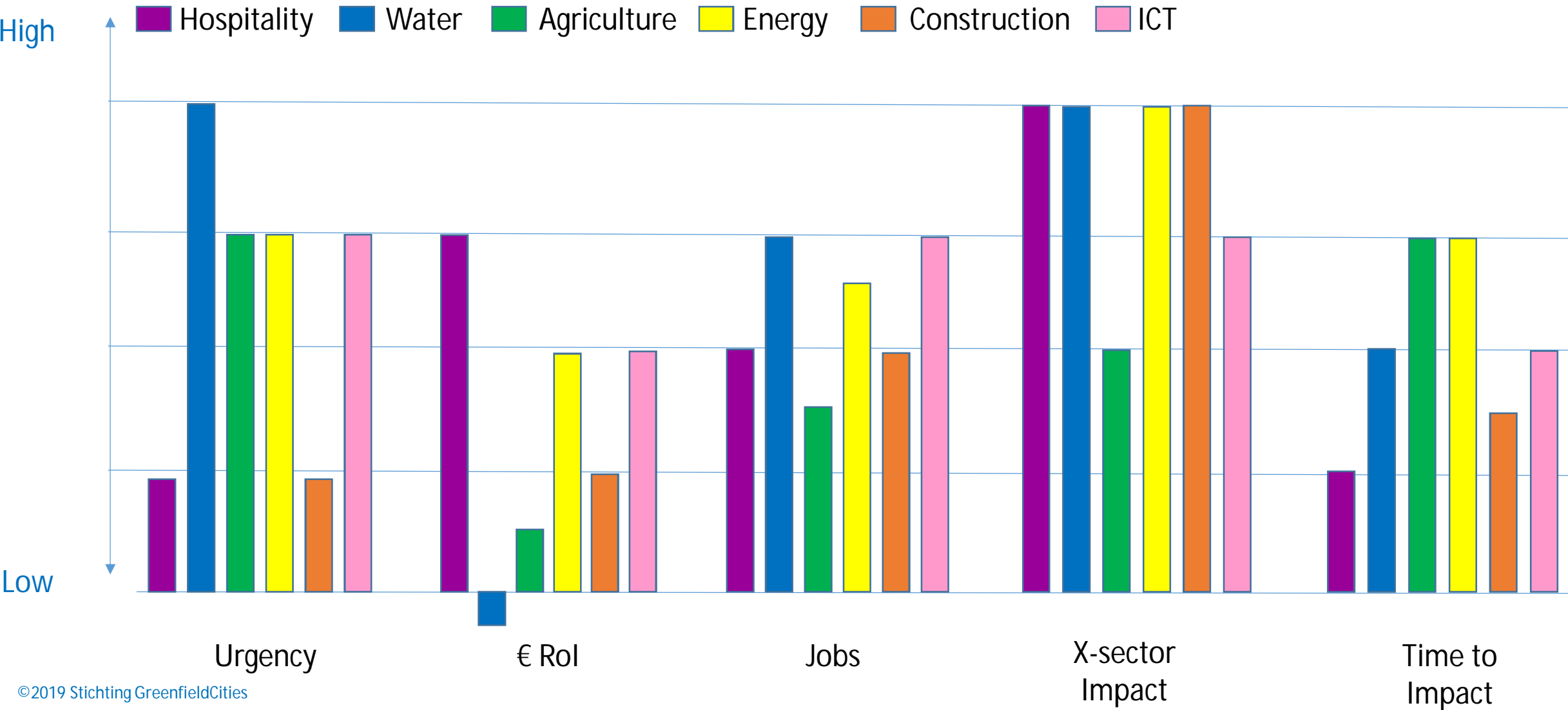
- Partners
 - Yarmouk Water Co.
 - Semilla/Nijhuis
 - CEWAS

Roles GreenfieldCities:

- 1) Connect, enable, co-develop & facilitate.
- 2) Support partners.
- 3) Market the concept.
- 4) Maintain, monitor & report.
- 5) Secure rents and utility revenues and prove the financial viability to impact investors.

X-Sector Importance

Strong RoI cases support weak RoI cases / short term impact cases fuel long term impact cases, etc.



5-7 Year Youth Business Campus Impact



- ① 1.500 direct Jobs
@ JOD 12.000/year
- ② 1.500 indirect jobs
@ JOD 7.200/year

Participation grade of women on Campus >50%
100% equal rewarding on Campus
50-100 low cost child care places on Campus
Female labor force participation rate in Mafrqa Governorate at >22%



- ① 80% finds job > 3 months
after graduation

90-100% renewable energy on Campus
Building energy demand: <55
kWh/m2/year on Campus



- ① Primary Campus drinking Water use:
<30m3/person/year)
- ② >10m3/person/year rain water
collection on Campus

>80% Campus users trusts and appreciates
GFC Campus management & operations
Transfer 20-40% of management tasks to
local government in 5 years
Hosting > 1000 Syrian refugees



- ① >40 kton CO2eq reductions on Campus in 15 years
- ② >12 Mton CO2eq reductions in Northern-Jordan in 20 years
- ③ 5-10% climate change adapted buildings in Northern-Jordan
- ④ 100 lead farmers in Northern Jordan skilled in adapted farming

>5 education partners
> 5 NGO partners
>50 new companies



Dutch and EU Perspective



- Enhancing economic strength & stability in the region of origin
- Prevent societal & political tensions
- Impact for NL / EU (SDG 8 & 16):
 - Reception, accomodation & integration costs non-western refugee > 150 k€ per 5 year
 - Public investment YBC model: 3 to 5 k€ per refugee
 - Business case for humane, sustainable care & development in the region is very strong
- Justifies public funding in development and building of Youth Business Campuses
- Foreign trade, export of knowledge & services:
 - WUR, Waternet, Alliander, Lagerwey, TGS-Unica, RC Panels, Deerns Consulting Engineers, Priva, VANAD Group

Feasibility Aspects



- Economy:
 - Jordan and Mafrq economy fragile, labor productivity too low, import dependency for key resources: reforms and increasing labor productivity needed
 - However, realistic economic opportunities exist in six economic sectors
- Education:
 - Big gap between market demands and skills youth Mafrq also caused by lack of intern places to learn on-the-job
 - Youth Business Campus breaks this vicious circle
- Overall financially feasible, however
 - Pop-up stage ('proof of concept', pilot) needs predominantly public funding
 - After 'proof of concept' funding predominantly from impact investors and private sector
- Spatial planning & Legal aspects (incl. environment): no show-stoppers
- Risks: acceptable and well manageable; mitigation well possible

Funding Needs and Possible Sources



	2019-2020	2020-2021	2021-2022	2022-2023
Need	€7,5M-€9M		€15M-€18M	
Possible Sources:				
Gov. Grants & Donors	€7,5M-€8,5M		€3M-€4M	
Impact Investment	€250-€500k	€300-€500k	€12M-€14M	
Campus Services Revenues/yr	€200-€300k	€400-€700k	€400-€700k	€1,5M-€2M
90-95% Public Funding “The years of proof” 70-90% Private Funding				
Added value Mafrag Economy/yr	€300-€500k	€700-€900k	€1.5M-€2M	€5M-€10M

Campus service performance and first campus revenues tip the balance towards impact investment during “Years of Proof”

Embeddedness & (political) support



- What stakeholders like:
 - Small start
 - Step-by-step approach (limit risks)
 - Multi-sectorial approach
 - Long-term commitment
 - Investment in sustainable infrastructure
- In NL:
 - Political support across the board for (sustainable) reception in the region
 - Strong political support from MPs in government coalition for Youth Business Campus model (+PvdA & GroenLinks)
 - Fits policy outlined in the 2017–2021 Coalition Agreement “Confidence in the Future” hand in glove
 - GFC’s mission and actions aligned with key elements of Minister Kaag’s Policy “Investing in Global Prospects”
 - 6 Letters of support &/ Letters of Intent

Embeddedness & (political) Support

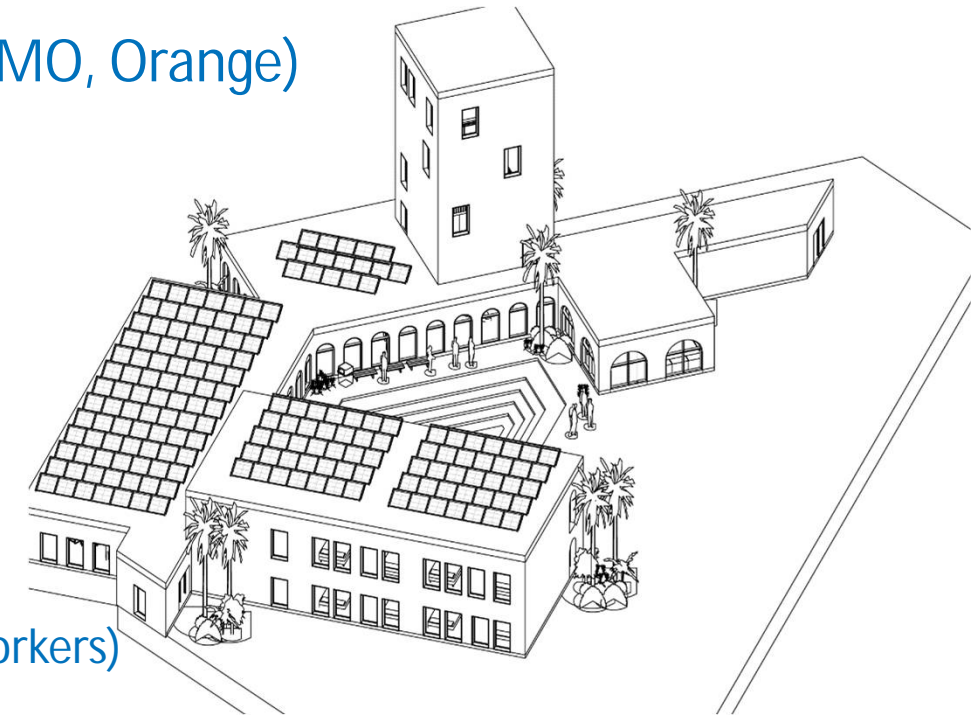
Jordan



- Strongly embedded, wide support and appreciation for YBC concept and plan
 - Office in Mafraq. *De facto* part of King Hussein Free Zone front office
 - Influential Jordan Advisory Board
 - Strong local Mafraq Advisory Board (connected to tribes and Decentralized Council)
 - Strong fit with important sectors for Mafraq
- Many stakeholders (public, educational providers, knowledge institutions, private sector organisations) have expressed support and intent to cooperate
 - 44 (!) letters of support and Letters of Intent
 - All key ministries are on board (Prime Ministry, MoPIC, MoL, MEMMR, MoE)
 - Education partners, WUR, AABU, Luminus Education, RBK.org will come to the YBC
 - GIZ and JREEEF adopted the energy part of the YBC and GIZ submitted proposal with BMU
 - Orange, Priva, Uniq, Millennium Energy, Landmark Hotels are first private sector partners
 - Support from competent authority (MDC) and request to Minister Kaag to co-fund the project
- GreenfieldCities is becoming part of Jordan national and local policies

Way Forward: What will we do next

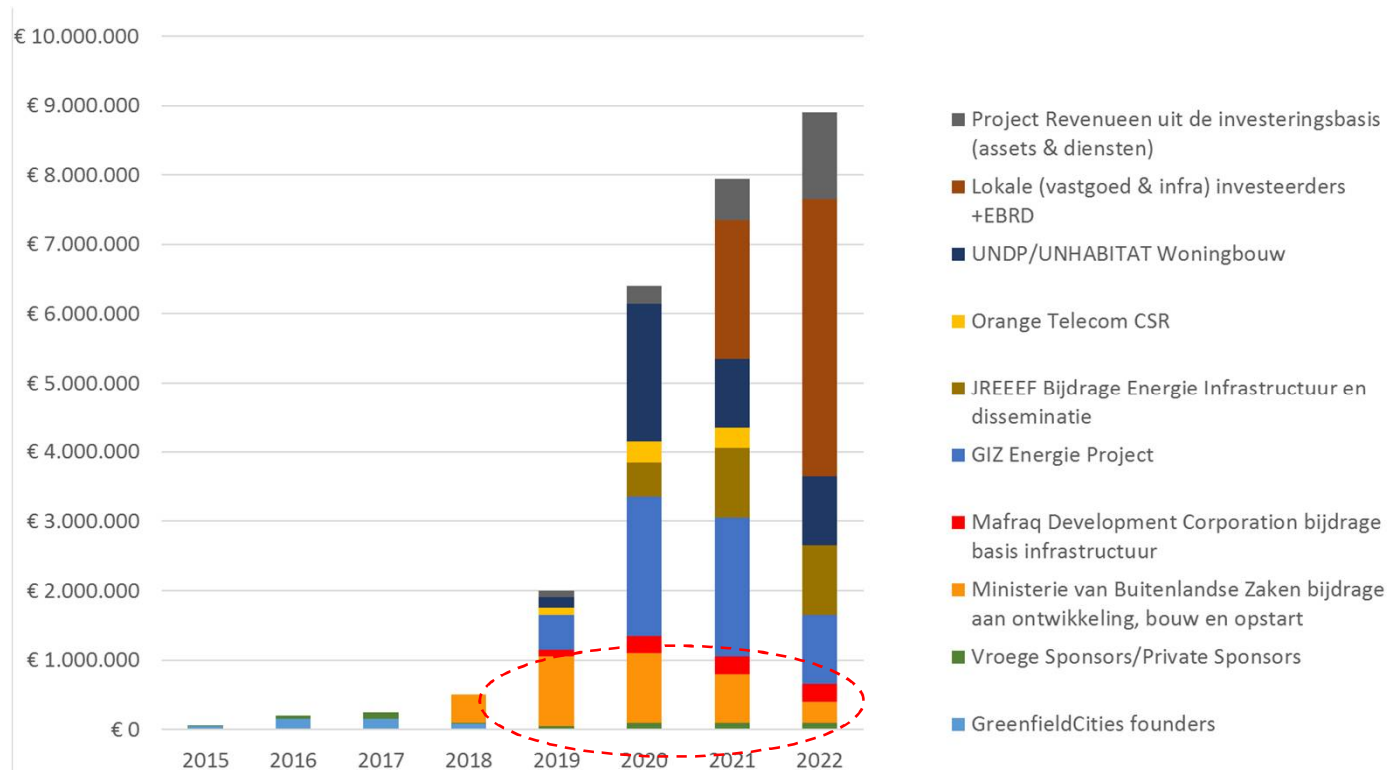
- 1st goal: realize exhibition center and Pop-up stage
 - Secure Donor funding (NL Government, GIZ, JREEEF, EU, FMO, Orange)
 - Contingency in progress: crowd and philanthropy funding
 - Confirm stakeholder position inside Jordan
 - Build the local Mafrag implementation team
 - Complete social and technical engineering
 - Complete permitting
 - Execute, Procurement and Construction
 - GIZ Energy program
 - UNIQA building program (including training Jordanian & Syrian workers)
 - Semilla Water Solution
 - Orange ICT launch
 - Open by Q2 2020:
 - Test the combination of services and infrastructure and revenue generation potential
 - Test if the expected further growth in momentum and local ownership and momentum will happen



The GFC exhibition center is the initial 250 m2 of the pop-up stage

Build-up Donor funding & Co-financing

- Necessary for starting pilot Pop-up stage preferably from Dutch Government: € 3 million over 4 years
- Multiplier/leverage co-financing & private financing > 5



Ontwikkeling & Bouw Demonstratie Fase Youth Business Campus Mafraq

Voorstel [versie 0.9]



Opdrachtgever	Minister van Buitenlandse Handel en Ontwikkelingssamenwerking
Gevraagd bedrag	€ 3 miljoen gefaseerd in vier jaar op basis van tussentijdse mijlpalen. In te zetten voor projectontwikkeling, gedeeltelijke financiering bouw en een deel van operationele aanloopkosten
Auteurs	Arie van Beek & Joris Benninga (GreenfieldCities)
Datum	20 februari 2019

Extra Slides

Advantages Funding NL Government



- Achievable and measurable impact in the fields of Economics, Climate, Environment and Gender.
- The Youth Business Campus is an innovative concept for sustainable care and development of migrants in their own regions of origin. This can help shaping the Dutch policy on migration. The concept has repetition and scaling potential and can reduce or avoid costs of reception and integration in the Netherlands or the EU.
- The Netherlands can lead the EU policy development on migration by further developing GFC.
- The combination of sustainable assets, services and capacity building immediately yields financial revenues. This secures a sustainable operation of the Youth Business Campus and reasonable returns for impact investors.
- GFC has the support to attract co-funding in the short-term and private (impact) financing in the medium-term. The expected leverage on the Dutch government base funding is at least a multiplier of 5.
- The strong local embedding in Mafrag and the long-term commitment to support the host community increases tribal, public and private buy in and create export opportunities for Dutch companies and knowledge institutions.

Hospitality

Need/Demand

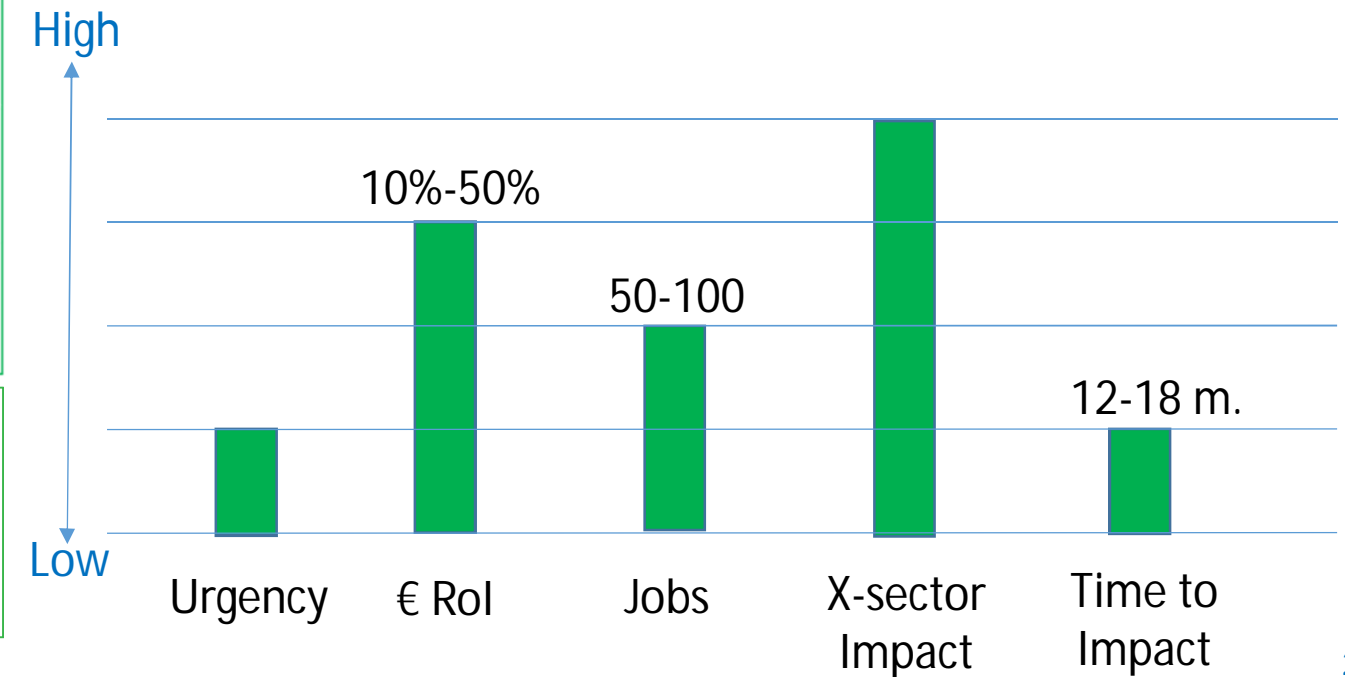
- Few quality hospitality services in Mafraq for:
- Business travellers to the Campus/Free Zone (1-10/d)
 - NGO workers in Za'atari refugee camp (5-20/d)
 - Digital nomads, Emerging tourism, Locals (5-30/d)
 - On the job training spot hospitality students (10-30)

What

- A high quality, 3-star hotel including:
- 20-50 Rooms/Studios (# expandable)
 - Co-working space, wedding/ conference facility
 - Restaurants and catering
 - Women-friendly serviced public space

How/Devex-Capex/Revenues

2019	2020	2021	2022
Partner/Develop/Fund (10 rooms)		Expand (30-50 rooms)	
€500k-700k		€1,5-2M	
	€200-250k/yr		€800-850k/yr



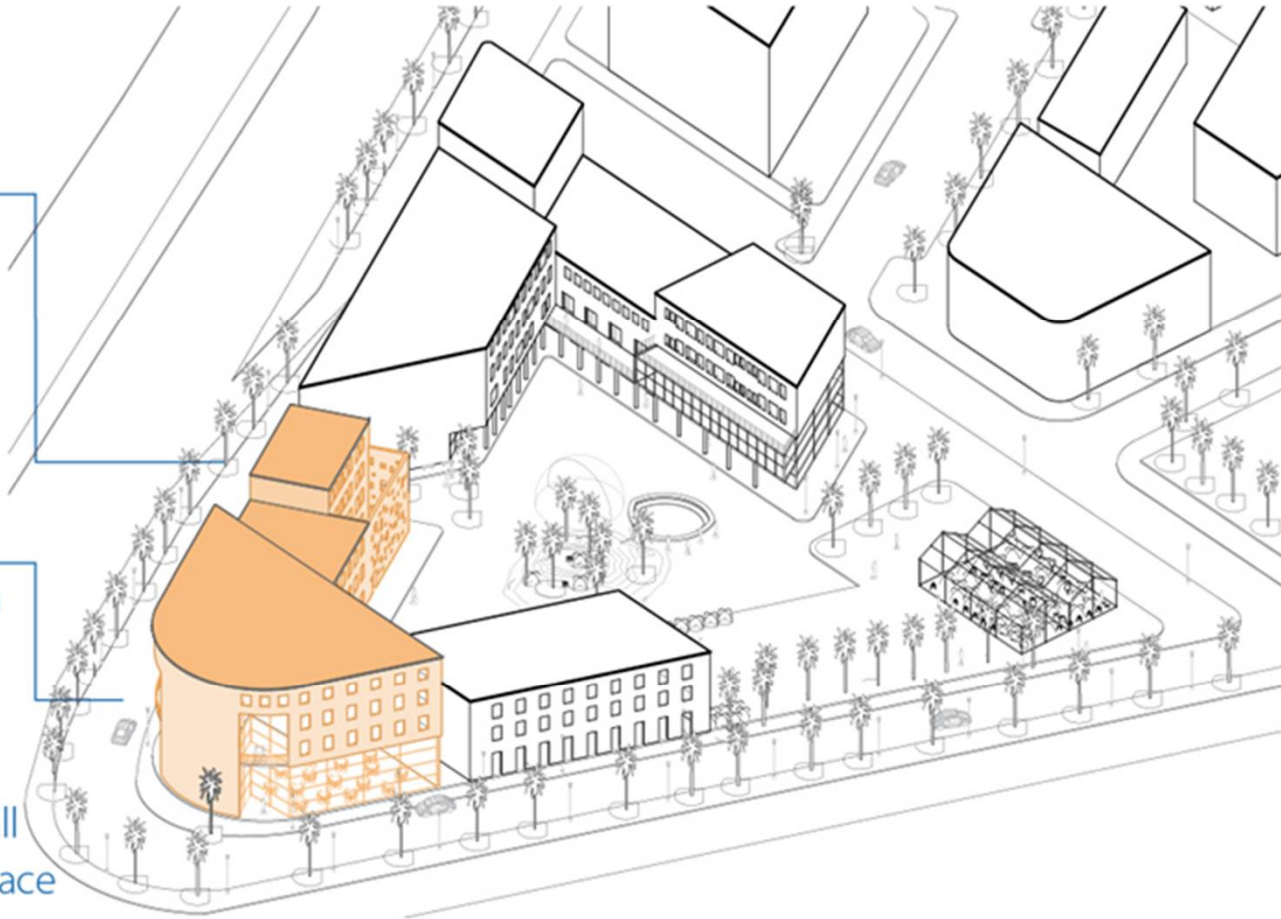
Hospitality

Women Oasis

- Public Space
- Dorm
- Retail
- Study Space
- Café

Hotel

- Accommodation
- Restaurant/
Catering
- Wedding/
Conference hall
- Co-working space



The hospitality services on the Youth Business Campus will create liveliness on the Business Campus, attract citizens from Mafrq, include an environment designed for women (*Women oasis*) to increase female labor participation in Mafrq, and host hospitality services for workers and business travelers from the Free Zone such as accommodation, healthy food and co-working space

Water Management



Need/Demand

- Looming aquifer depletion before (now-2030)
- Irregular supply to citizens of Mafraq
- Yarmouk Water Co. Deficits (>€50m debt)
- Capacity Building and Change Management
- Technology Demonstration and Social Acceptance

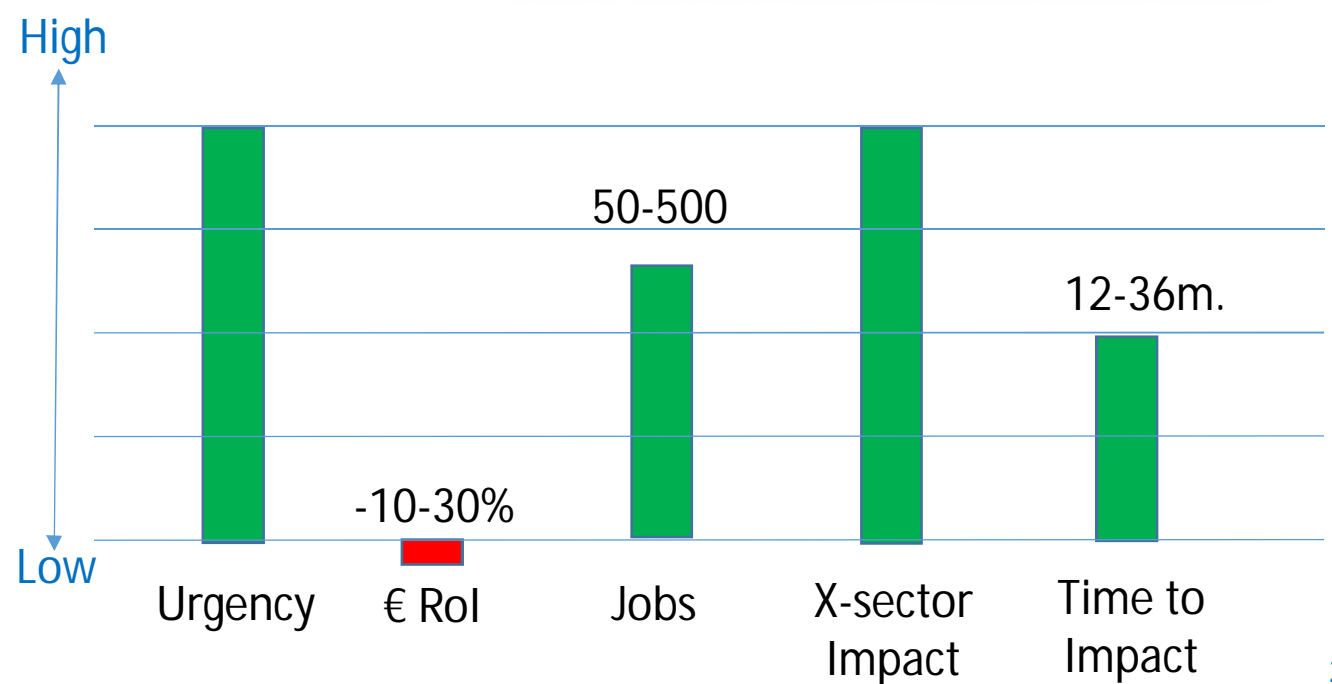
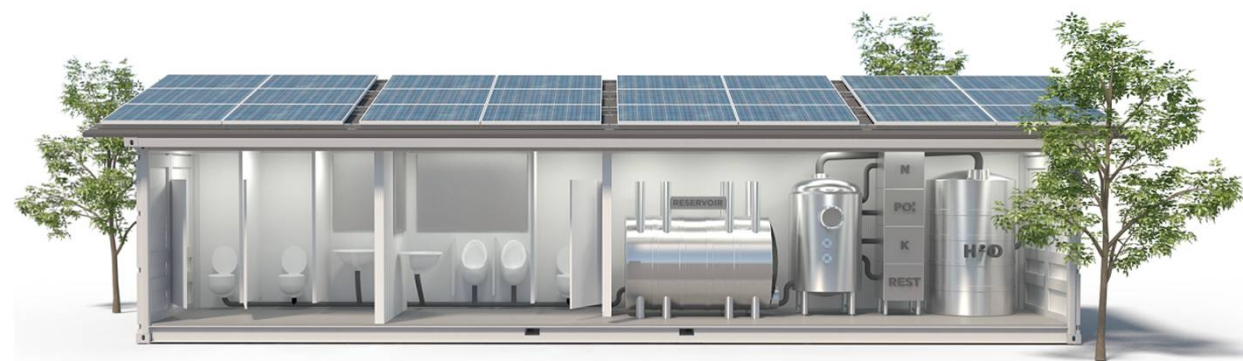
What: Mimicking 2030 water situation

A small scale high-tech drinking and waste water system

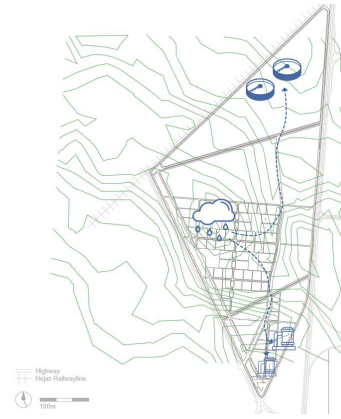
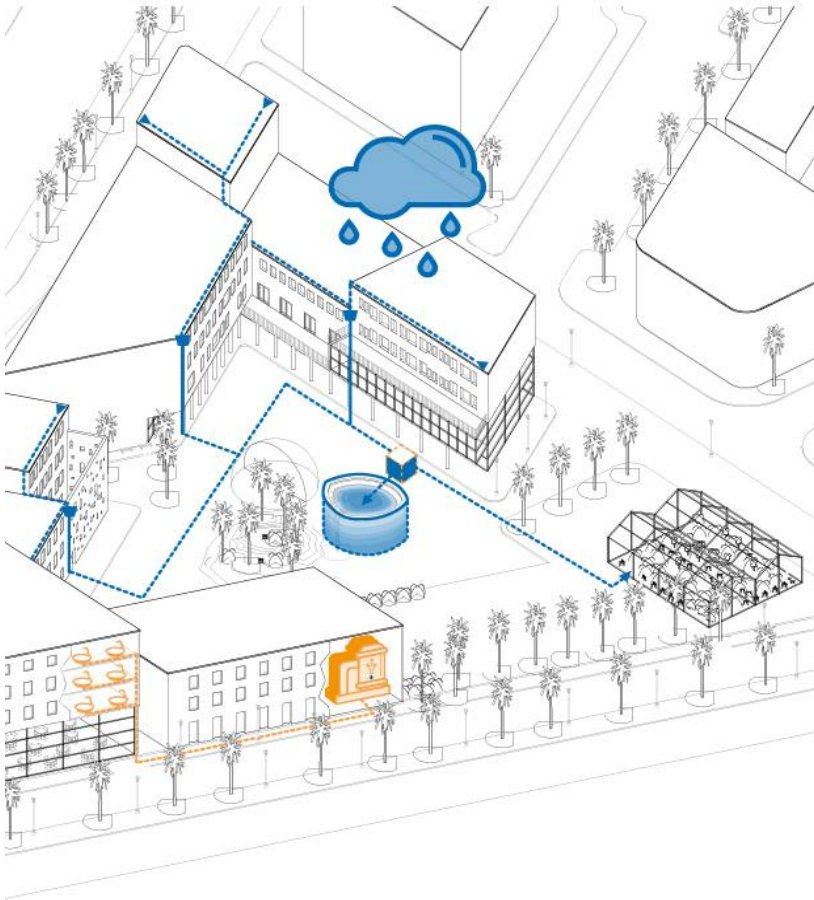
- 20-30% rain fed
- Including grey water system for Agri-business
- High quality WWT, (possibly back to DW quality)
- R&D and Applied Sciences Facility

How/Devex-Capex/Revenues

2019	2020	2021	2022
Partner, Develop, Fund, Build		Expand (30-50 rooms)	
€700k-900k		€500k-700k	
€15k/yr		€30-50k/yr	



Water Management



The water management system on the Campus aims to implement solutions needed for the expected Mafrq water situation in 2030. It offers training and job opportunities for youth, demonstrates several water-saving and re-using methods in the built environment and agri-business activities. It is also a demonstration platform for private sector companies in the water sector to integrate, promote and market their solutions in the wider region.

■ Agri-Business

Need/Demand

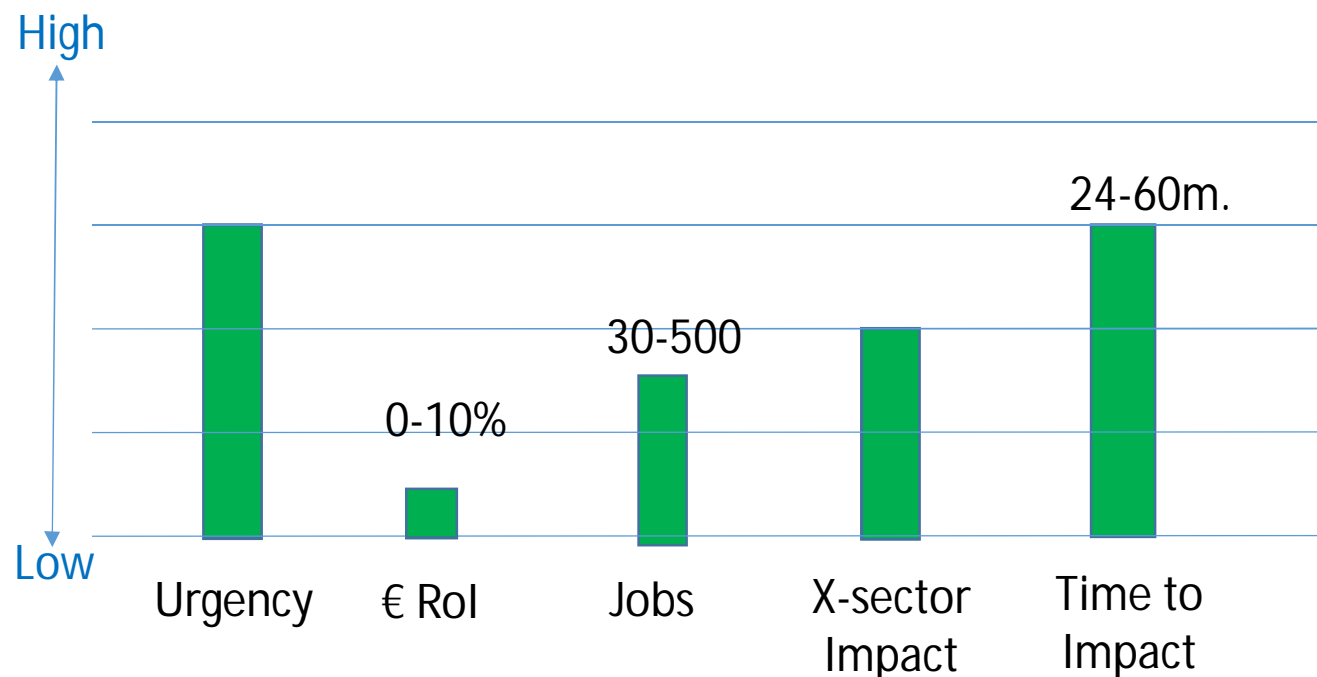
- Reduce water consumption and energy bill
- Innovation and technology
- Higher-value products
- Increase income from production
- Growth capital for necessary investments

What – Farmer Field School (with a cooperative)

- R&D centre: Demonstration lab, fields and greenhouse to develop, test and teach about demanded products with a production fit in Mafrag
- 10 greenhouses for rent (production R&D outcomes)
- Central post-harvesting (processing) facility

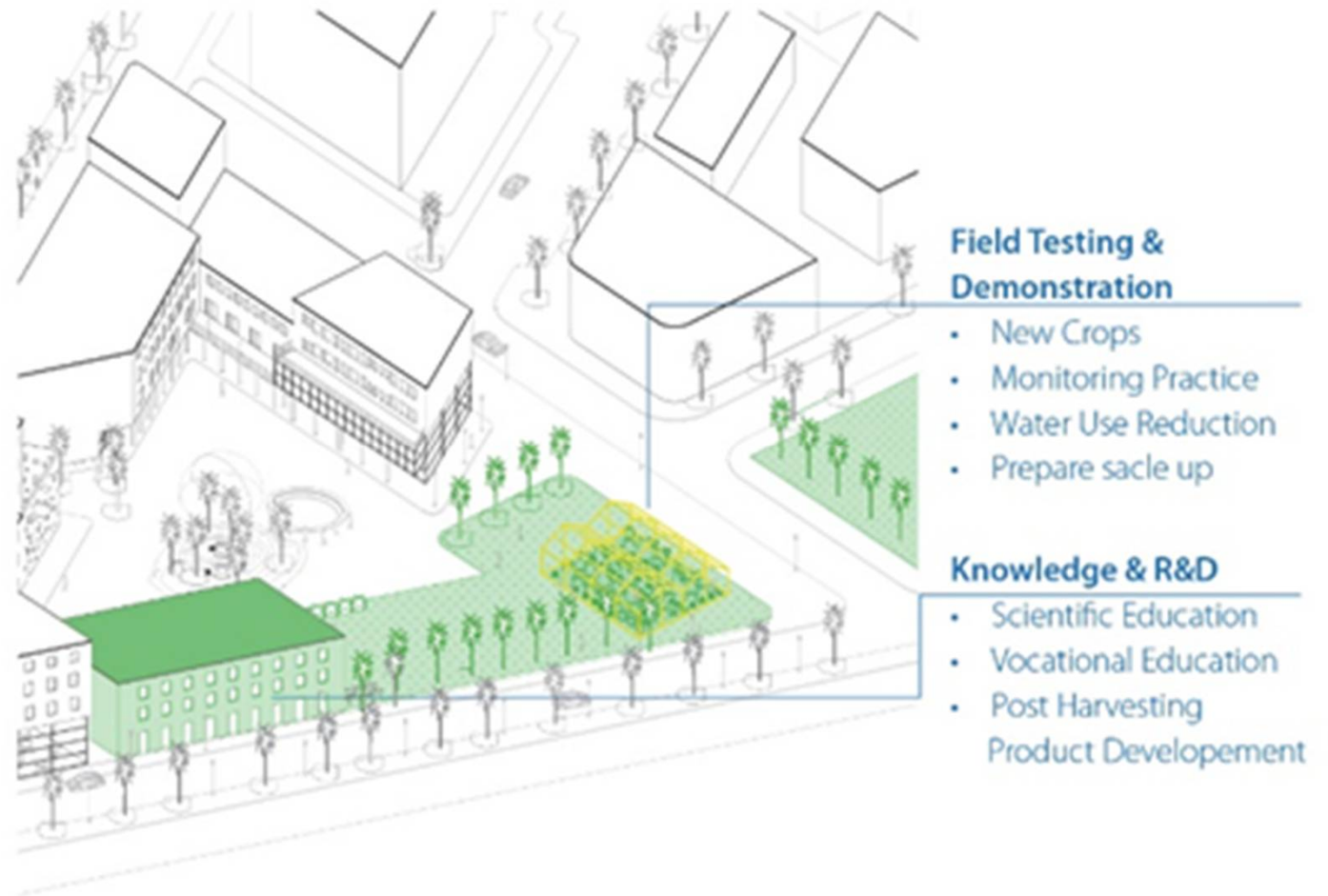
How/Devex-Capex/Revenues

2019	2020	2021	2022
Partner/Develop/Fund (facilities)			
€400-600k	€1-1.5M	€2-2.5M	
	€40-60k/yr	€200-250k/yr	



Agri-Business

The Agri-business component contains a **post-harvesting facility** for production of higher value products (medicinal herbs, saffron and tomato paste) for farmers within a cooperative, and **R&D center** with labs, demonstration fields, vocational- and scientific education about the production of new crops and products, monitoring practices and water use reduction



Energy

Need/Demand

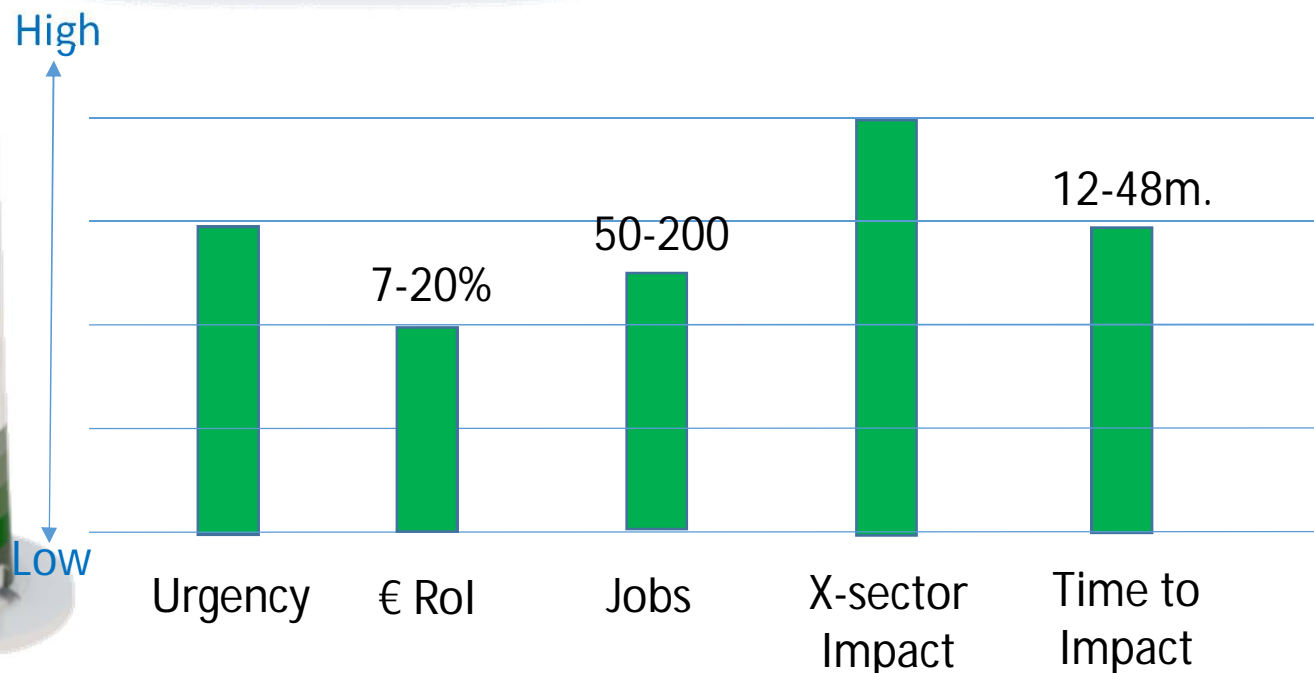
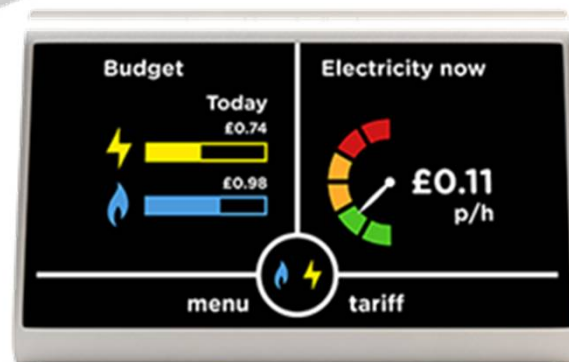
- 95% of energy is imported
- Rise in electricity demand
- Growing renewables share requires smart grid
- Paris Agreement GHG reduction goals
- Capacity building integrated energy systems

What: Demo-park, Education & Dev. Company

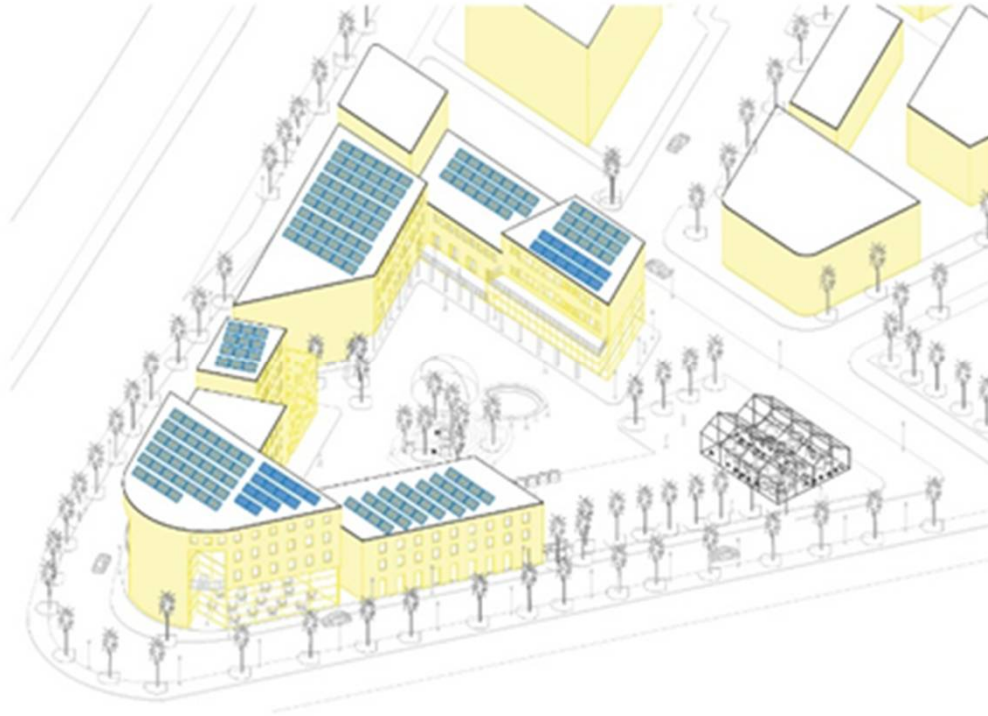
- Campus itself is monitored energy live lab
- Smart Grid on Campus, including storage
- Vocational & academic education & research
- Renewable Energy & Energy Efficiency Development & Service Company

How/Devex-Capex/Revenues

2019	2020	2021	2022
Partner, Develop, Fund, Build		Expand (regional project devel.)	
€800-900k		€20M-50M	
€40-70k/yr		€3M-€7M/yr	



Energy



The Energy system balances renewable energy supply and energy demand efficiently. The Youth Business Campus consumes energy from solar PV and wind, linked to a smart grid and managed by an Energy Development Company creating training and job opportunities. The limited capacity of the regional grid requires smart solutions to manage demand and supply.

The Campus smart grid will be connected to the local distribution grid and we already cooperate with the local utility IDECO to create “live lab” environment. We also work with GIZ to align and integrate their energy training activities in the Free zone

Construction

Need/Demand

- Speed & Quality for regional reconstruction efforts
- Jordan building energy performance needs push
- Embedded capacity building in innovative construction
- Regionally specific (applied) science demonstrations

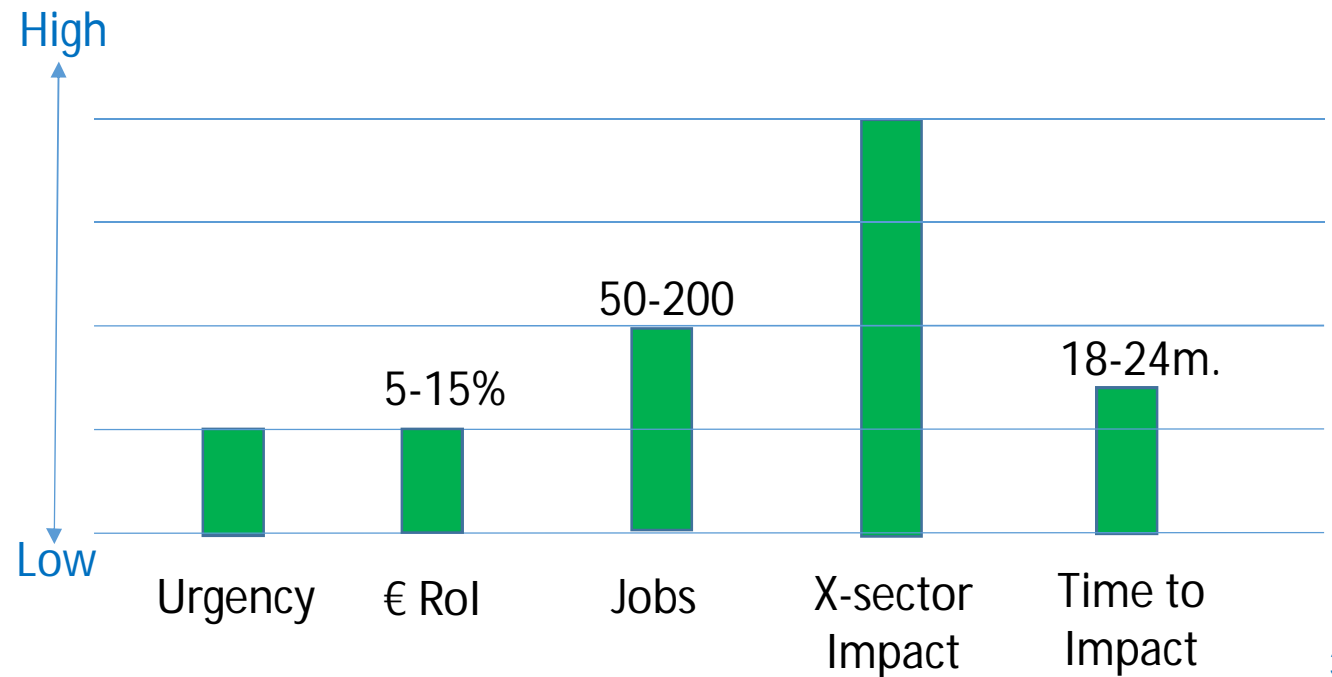
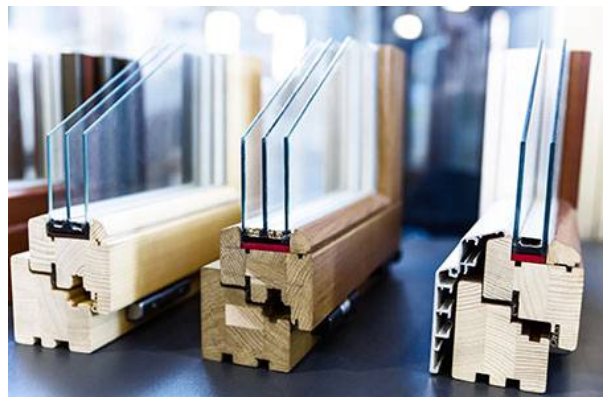
What

Simple, yet high quality, “smart” buildings on campus

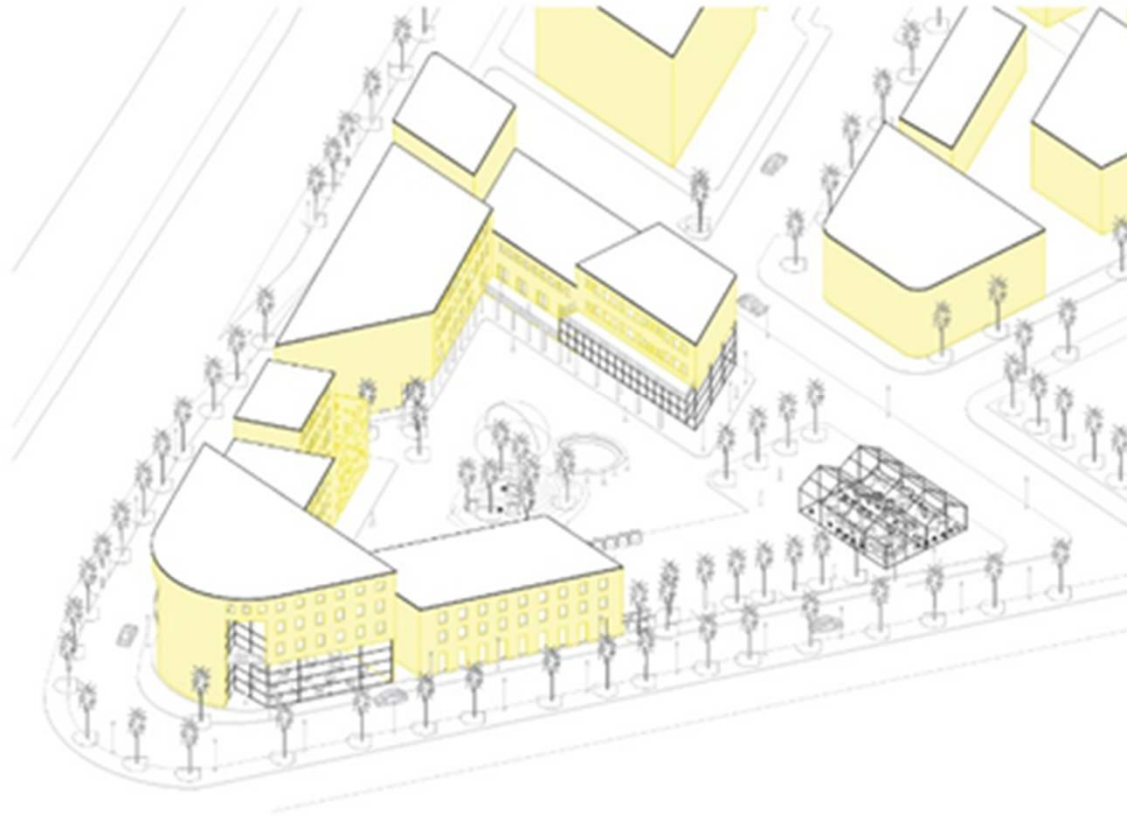
- Vocational and scientific training
- Innovative panel wall factory (Free Zone, 15-25 jobs)

How/Devex-Capex/Revenues

2019	2020	2021	2022
Partner, Develop, Fund, Build (7000m2)		Expand (15000m2)	
€3.5M-4.5M		€6M-€7M	
€200k-300k/yr		€400k-900k/yr	



Construction



The core of the construction approach consists of using SIP Wall, Roof and Floor systems.

We aim to bring a small Pre-Fab building factory to the Free Zone that uses the Youth Business Campus as launching customer.

This creates the opportunity to demonstrate users and visitors of the Youth Business Campus to learn about the benefits of resource efficient and energy efficient building envelopes and building comfort.

It offers also education for architects, engineers, contractors and construction workers to gradually change main stream construction methods.

Need/Demand

- Virtually no Mafrag IT graduates find jobs (60% IT graduates unemployed in Jordan)
- Lack of professional & IT Skills
- No Private Sector IT companies in Mafrag
- Market wide need for good programmers & engineers

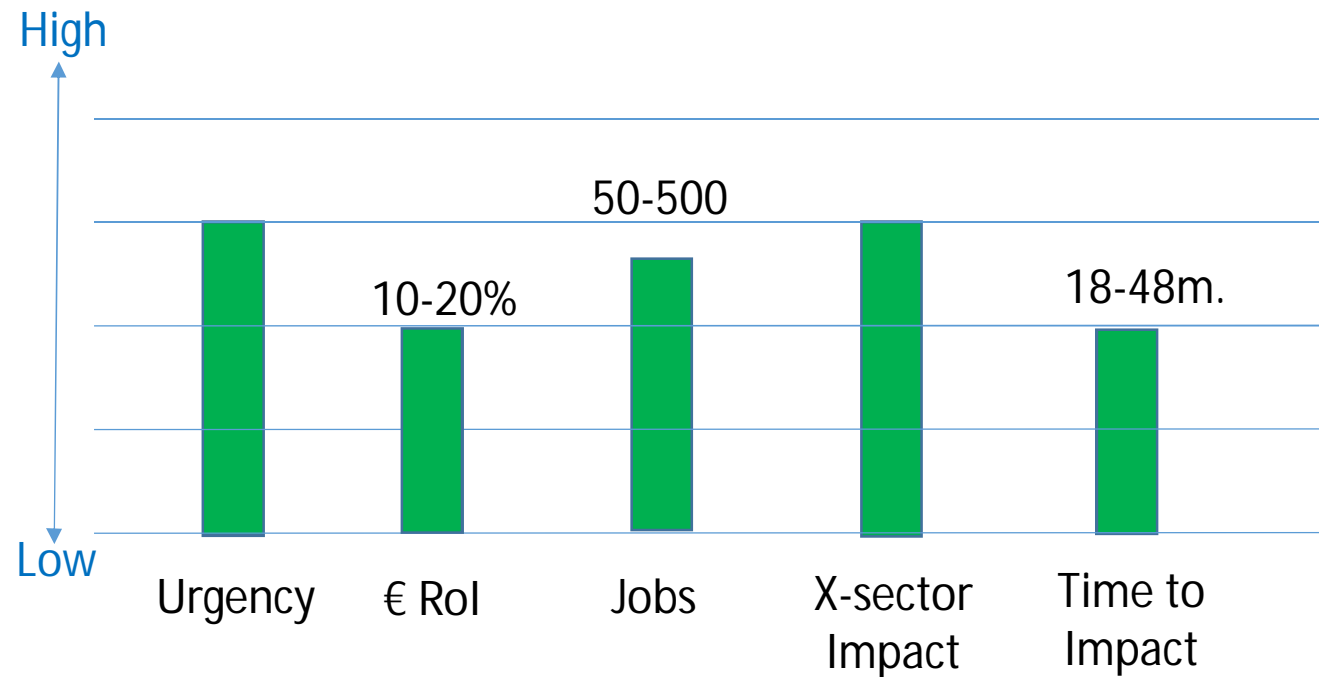
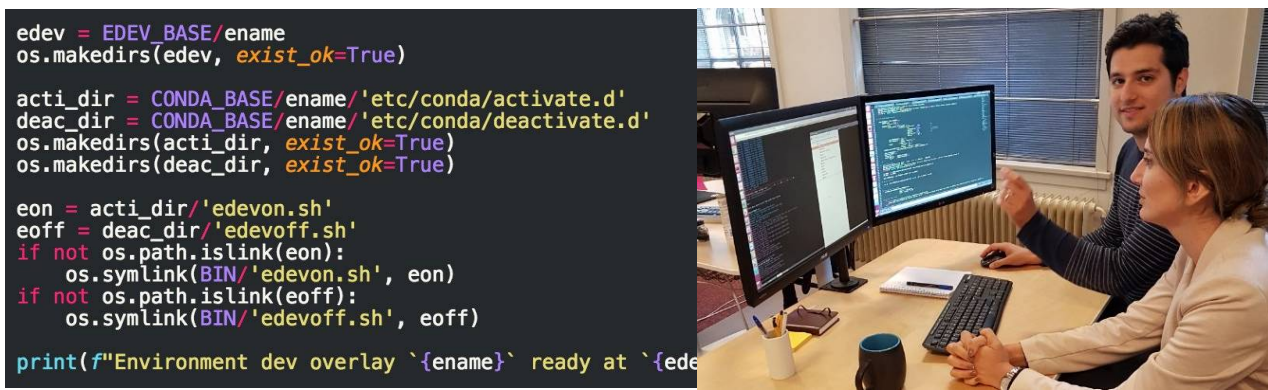
What

Post-Academic working and training space for “intense IT learning” and IT job execution, including connectivity.

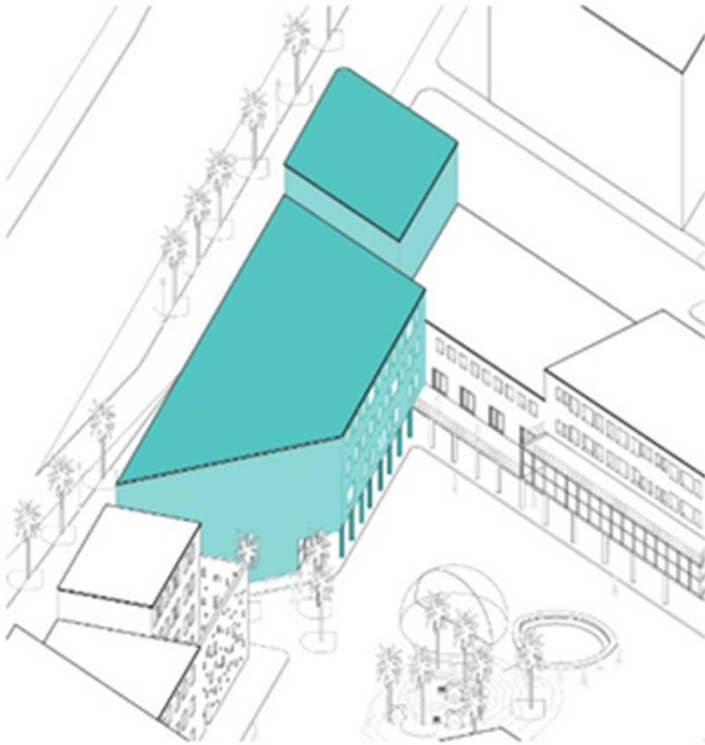
- Partnerships with IT educations / IT employers
- Hackathon and other IT exchange events
- English language and professional skills training

How/Devex-Capex/Revenues

2019	2020	2021	2022
Partner, Develop, Fund, Build (50 seats)		Expand (150 seats)	
€250k-400k		€600k-800k	
€30-50k/yr		€70-90k/yr	



ICT Hub

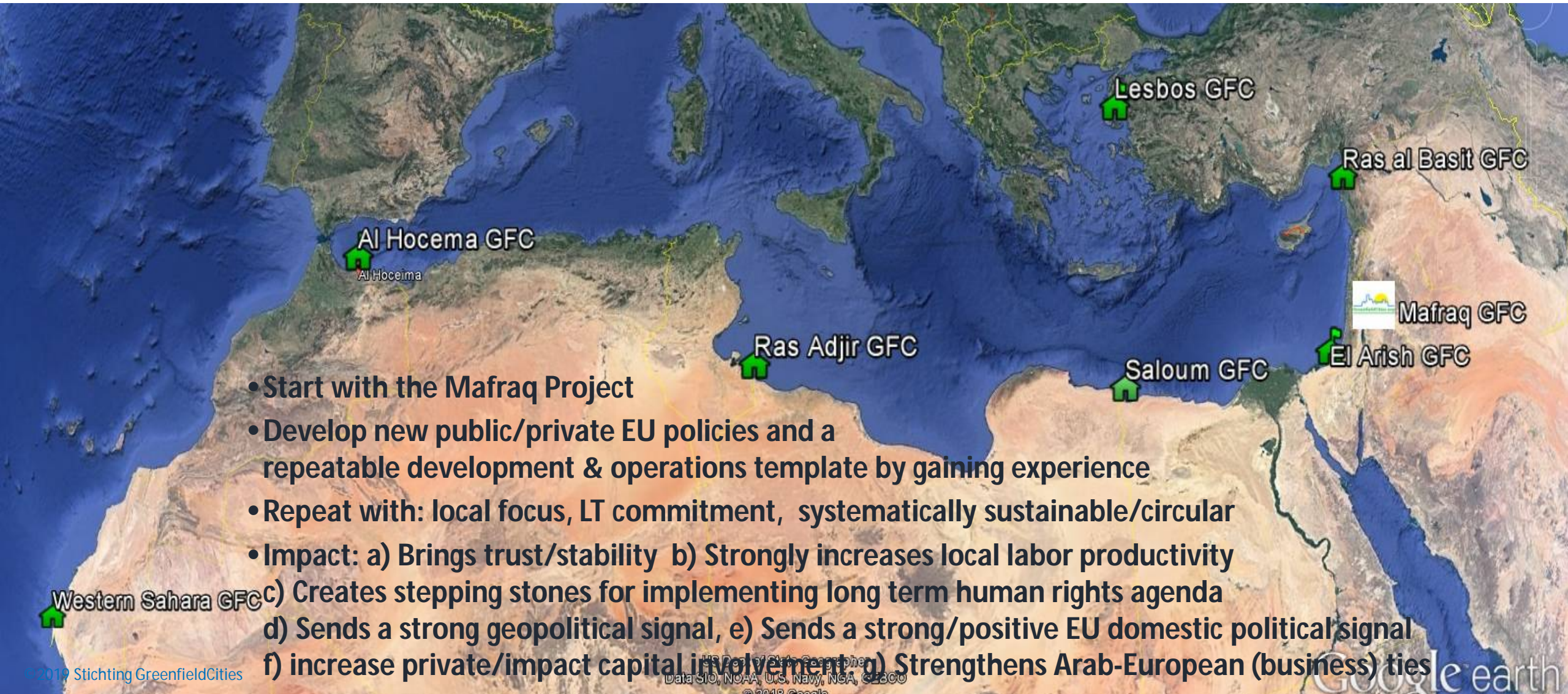


ICT has a central function on the Youth Business Campus as it is integrated within all the sectors.

It includes ICT infrastructure (glass fiber and a data center), ICT training and ICT jobs. ICT training, provided by dedicated training providers and consists of market-driven high intensity training, internships and hackathon events.

ICT jobs come from the data center, start-up incubation and ICT companies (hiring partners) that also rent office space on the Youth Business Campus.

Vision: Scaling in time based on low risk seed projects, Real world feedback NL & EU policy leadership and Private impact capital deployment



- Start with the Mafraaq Project
- Develop new public/private EU policies and a repeatable development & operations template by gaining experience
- Repeat with: local focus, LT commitment, systematically sustainable/circular
- Impact: a) Brings trust/stability b) Strongly increases local labor productivity c) Creates stepping stones for implementing long term human rights agenda d) Sends a strong geopolitical signal, e) Sends a strong/positive EU domestic political signal f) increase private/impact capital involvement g) Strengthens Arab-European (business) ties



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Download [Final Report Feasibility Study](#)

Website: www.greenfieldcities.org