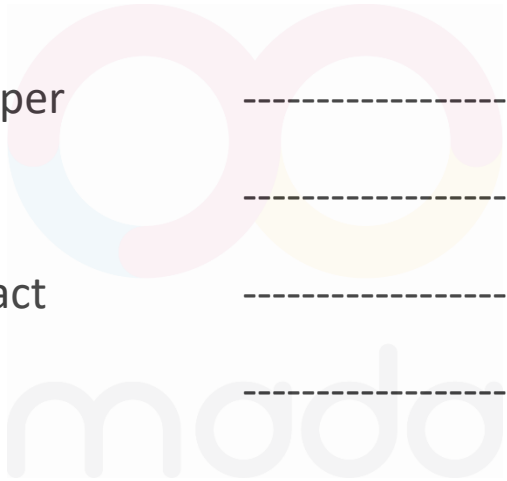
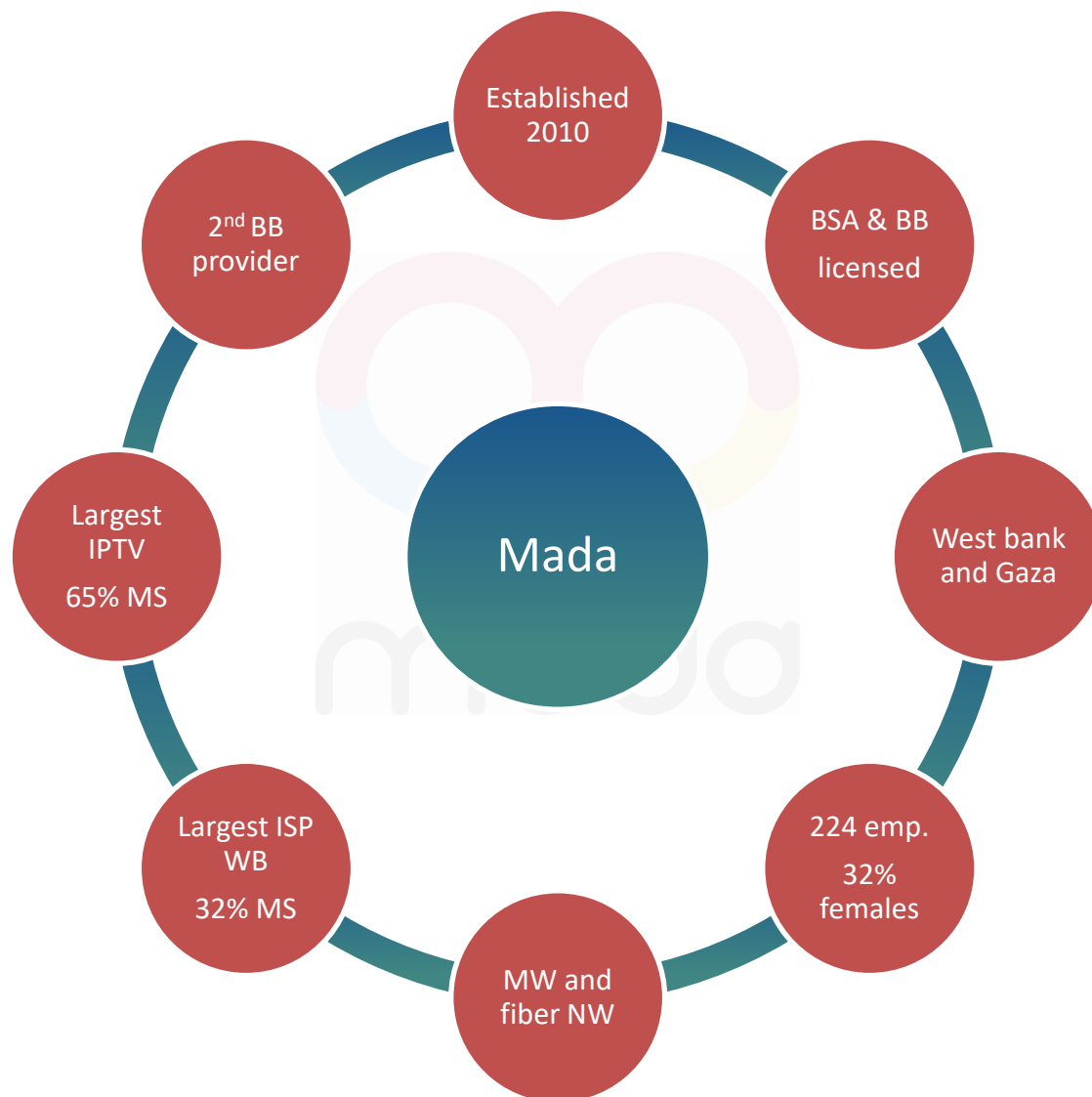




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FTTH: Service definition

FTTH (Fiber to the home) is an access solution designed to deliver communication signals over optical fiber, directly connecting the operator’s switching equipment to homes and buildings.

FTTH – Advantages over copper



FTTH: Advantages over copper / contd.

Speed	<ul style="list-style-type: none">• Fiber optic cables are made of tiny threads of glass using light pulses. Therefore, they can transmit huge amounts of data.
Reach	<ul style="list-style-type: none">• Fiber optic cables can carry data up to several thousands of meters with minimal attenuation or signal loss.
Reliability	<ul style="list-style-type: none">• Fiber optic cables do not carry electricity which eliminates the effect of the electromagnetic interference (EMI) that interrupts data transmission. Fiber is also immune to weather changes and moisture and can last up to 50 years.
Security	<ul style="list-style-type: none">• Data is much more secure with fiber optic cables, which are almost impossible to tap into. Even if a cable is compromised or damaged, it can easily be detected.
Cost	<ul style="list-style-type: none">• Taking into consideration the hidden costs of copper, maintenance, interference, and replacement costs, fiber optic cable is a better financial option in the long run.
Future proof	<ul style="list-style-type: none">• A new technology that can satisfy the needs of future applications.
Environmentally friendly	<ul style="list-style-type: none">• Fiber is way more environmentally friendly since it lowers the demand for copper, consumes much less energy, produces much less equipment waste, and reduces carbon dioxide emissions.

Through this project. Mada aims to provide access over FTTH to the end users in the cities of Ramallah & Al-Bireh, and Bethlehem; with the following main objectives:

- Provide enhanced services with higher speeds in download and upload. (100 to 1,000+ Mb).
- Introduce more reliable networks with higher reach and superior quality.
- Improve customer experience using internet and add-on services (IPTV, online gaming, education, startups, applications, online shopping, business, etc.).
- Promote a monopoly-free market and improve healthy competition.
- Create a competitive advantage and encourage other investors to join in and increase the interest to invest.
- Convert to a more cost-effective model for both Mada and the end user.
- Open the doors for new industries, services, and applications.

FTTH: Project description

- Mada has already started the project in the mentioned cities using the existing infrastructure of JDECO. This approach would help the project move faster, expand faster, save costs, and minimize the environmental effect resulted by the required civil works in case of building a new infrastructure.
- We are investing \$8-8.5M in this project; \$6.5M already secured (a bank loan of \$5M, and a self-financing of \$1.5M). Hoping to get the remaining investment from F4J.
- This investment is needed to finance the purchase of equipment, software, and the involved labor and operations.
- As we speak, our pilot project in “Ein Munjed” / Ramallah has already started with 92 active customers using the new service.
- Our plan is to commercially launch the FTTH service in both Ramallah & Bethlehem cities by February 2022. By then, 40%+ of those areas shall be covered.

What is unique about our project:

- Mada has an extensive experience in building end-to-end networks and providing full-fledged services.
- Mada already has its own fiber optic lines connecting its switches to the world (2 redundant fiber optic rings connecting Mada to Europe through Israel, and to Jordan).
- Mada is already offering broadband including fiber optic connectivity to business customers in the middle region using JDECO infrastructure.
- Mada will be using an existing infrastructure (JDECO) which would enable Mada to move and expand faster, work with minimum negative environmental impact, and create jobs faster.
- Mada has decided to work with grade A suppliers building its network (Nokia Siemens).
- Mada has already started the project and is currently in an immediate need to hire 25+ personnel.
- An LOI of €2.2M was signed with Nokia Siemens to purchase a part of the required equipment.

FTTH: Socio-economic impact

FTTH is a vital aspect of any thriving community; as it contributes to the enhancement of the economic development, educational system, healthcare, business climate, and others.

A study by the World Bank concluded that a 10% increase in FTTH penetration would increase GDP growth by 1.38% in developing countries.

FTTH provides significant economic and social benefits. It enables developing countries like Palestine to grow and meet the UN sustainable development goals.

Economic development and job creation

- Creating 200+ direct jobs
- Creating thousands of indirect jobs
- Developing small businesses and startups
- Promoting outsourcing businesses
- Remote management solutions in healthcare and agriculture.

Education

- Online education
- Partnership with remote educational centers

Women empowerment

- Entrepreneurs and startups
- Remote jobs

FTTH: Socio-economic impact

Environmental impact	<ul style="list-style-type: none">• Less civil works (utilizing JDECO existing infrastructure)• Less cables and coils• Less maintenance and replacement work
E-government & National network	<ul style="list-style-type: none">• Supporting the implementation of E-government systems.• Creating a redundant network to backup the existing one.
Economic independency	To be able to compete the Israeli operators and regain their market share
Health care	Remote diagnostics, online collaboration with remote medical centers
Apps development industry	Supporting ICT industries (Apps development, programing and coding, etc.)

Project status

Item	Description	Progress %
Licenses	Acquiring all needed licenses and approvals	100%
Agreements with JDECO	Signing the agreement with JDECO	100%
Network planning	Network planning for the cities	100%
GIS plans	GIS planning and mapping	100%
Vendor selection	Selecting vendors and suppliers	100%
Equipment purchase	A LOI was sent to Nokia Siemens to purchase a chunk of the required equipment	
Jobs and talent acquisition	<p>25 employees are needed immediately, with some already hired:</p> <ul style="list-style-type: none"> • Project manager (hired) • 6 x Field technical supervisor (2 hired) • System engineer • 2 x GIS engineer (1 hired) • Sales manager (hired) • 8 x field sales agents (2 hired) • 6 x customer support agents (2 hired) 	

Pilot project status

Item	Planned	Implemented	Progress %
OLT installation	1	1	100%
OLT card installation	3	1	33%
ODF installation	2	2	100%
Main cable laying	5,200	2,400	46%
Feeder cable laying	3,000	1,706	57%
Joints	34	15	44%
Root splitters	40	18	45%
Street splitters	24	7	29%
Buildings connected	300	51	17%
Building splitters		51	
Customers installed		92	

- Financing shortage, which would slowdown our progress and expansion.
- The lack in skilled talents and required contractors.
- The expected increase on the demand of contractors which would affect the cost.
- The higher-than-planned efforts and costs needed to connect buildings.
- The worldwide shortage in some materials and equipment resulted by the COVID-19 impact.
- The fogginess in regulations and laws controlling the FTTH sector, which might lead to a price war affecting the business plans.

- Mada is fully determined to proceed in the project with the help and contribution of F4J for FTTH network due to our belief that such a project would help both private and public sectors, the people, and the industries to develop, expand, employ more people, create a level of hi-tech independence and ensure to attract more businesses.
- The mini pilot project in Ein Munjed has significantly helped us tune up our plans, verify and adjust our assumptions, and identify the challenges to better plan and to overcome any obstacle; therefore, the pledged amount will turn the wheel of positive progress.
- Our plan is to have around 80k active users on the network by the end of the 5th year of the project, 25k by the end of year one.
- We strongly need the support of F4J to be able to expand as planned, however, and in case F4J turned out not to be interested in investing, we would surely proceed but with a slower pace, narrower coverage, and with a negative effect on creating jobs.



Thank you

