26 years

OPTRONICS TECHNOLOGIES S.A.

FTTx NETWORKS

FTTH Ready!!!

79-81 Thessalonikis str, 183 46 Athens, Greece, 210-9837121, fax 9834814, www.optronics.gr, optronics@optronics.gr

FTTH Ready!!!

OPTRONICS Capabilities

COMPANY PROFILE

26 Years company specialization in:

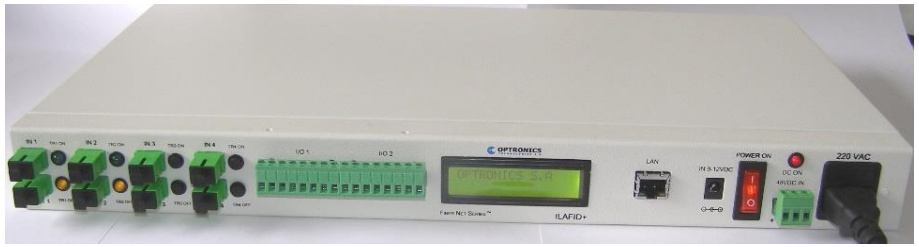
- **Fiber Optic Network Infrastructure Development** (Turn-Key projects including study, design, supply of materials, installation, maintenance, training)
- **Manufacturing of Fiber-Net Product Series**
- **Supply of products** (passive and active) and **Services provision** for LAN-MAN-WAN in Greece and abroad
- Implementation of the **first FTTH installations in Greece**
- Design-Deployment of the **first GPON installations in Greece**
- ISO 9001:2008, ISO 14001:2004 OHSAS 18001:2007 procedures
- OPTRON (ATHEX)

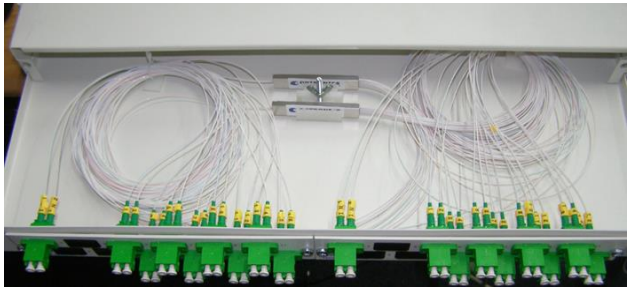
OPTRONICS TECHNOLOGIES S.A.

FIBER-NET Series

FTTH Ready!!!

- ILAFID monitoring detector
- Drawer Patch Panels
- Wall 4-24 panels
- ODFs - Cabins
- WDM & splitter cassettes
- Patchcords & pigtails
- SFPs-converters





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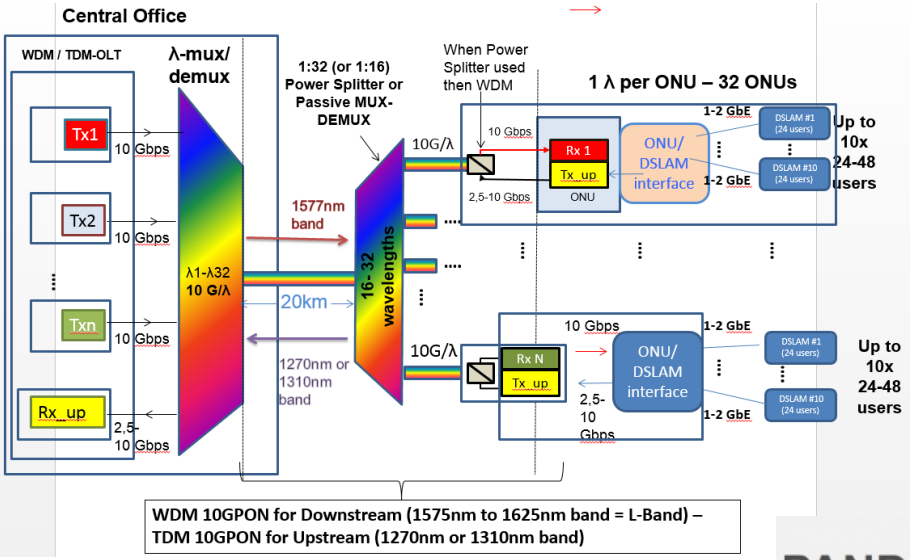
SEVENTH FRAMEWORK PROGRAMME

R&D

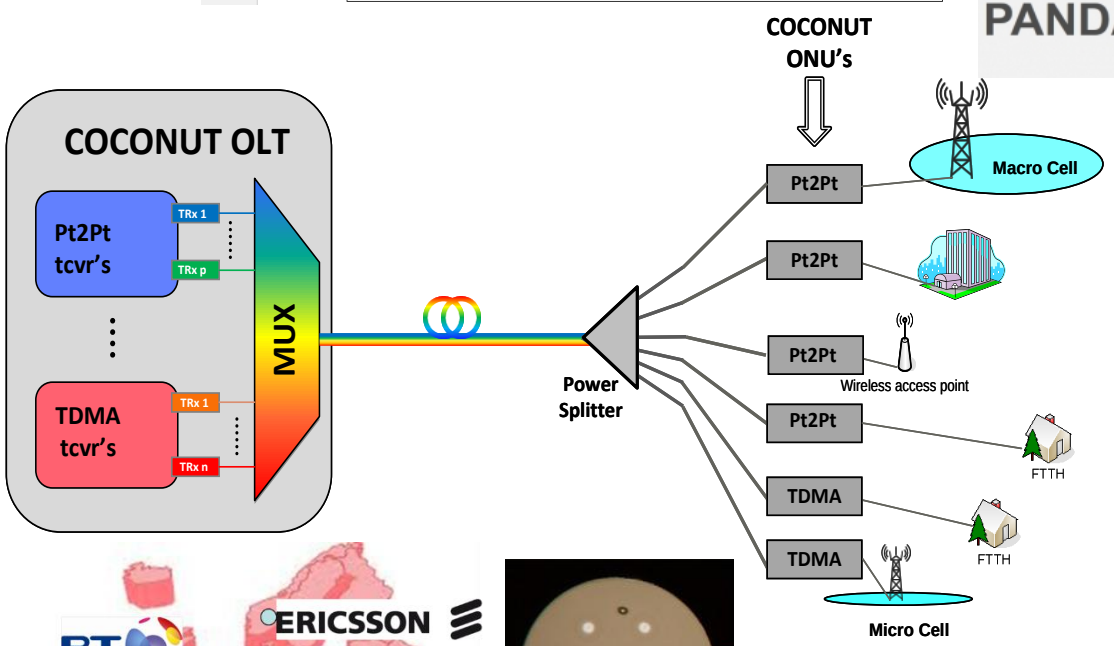


ASTRON

Adaptive Software defined Terabit tRanscriver for flexible Optical Networks

PANDA

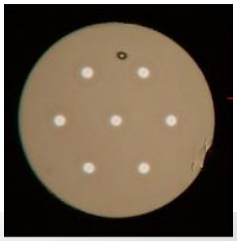
COCONUT



Flexible Optical X-connect

Building Next Generation Flexible Networking

INSPACE



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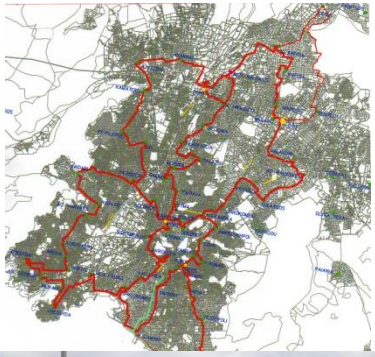
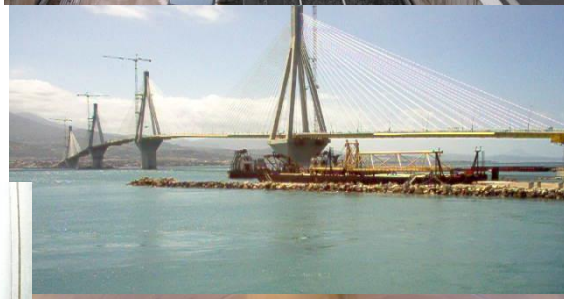
OPTRONICS Capabilities

FTTH Ready!!!

Turn-Key Fiber Optic Network Projects

Design, Construction, Commission, Documentation, Maintenance



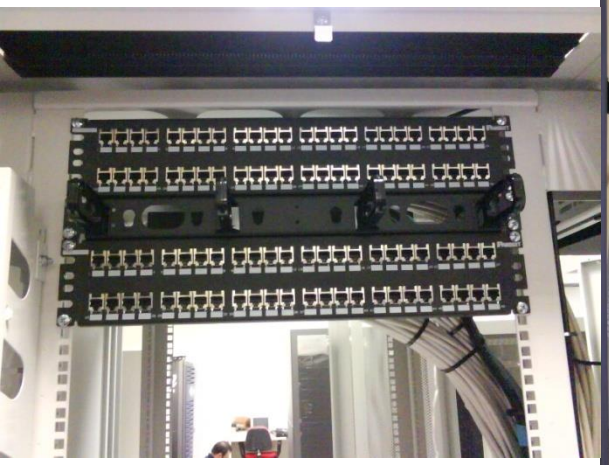


OPTRONICS Capabilities

OPTRONICS TECHNOLOGIES S.A.

FTTH Ready!!!

DATA CENTERS CONSTRUCTION



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FIRST FTTH PILOT IN GREECE

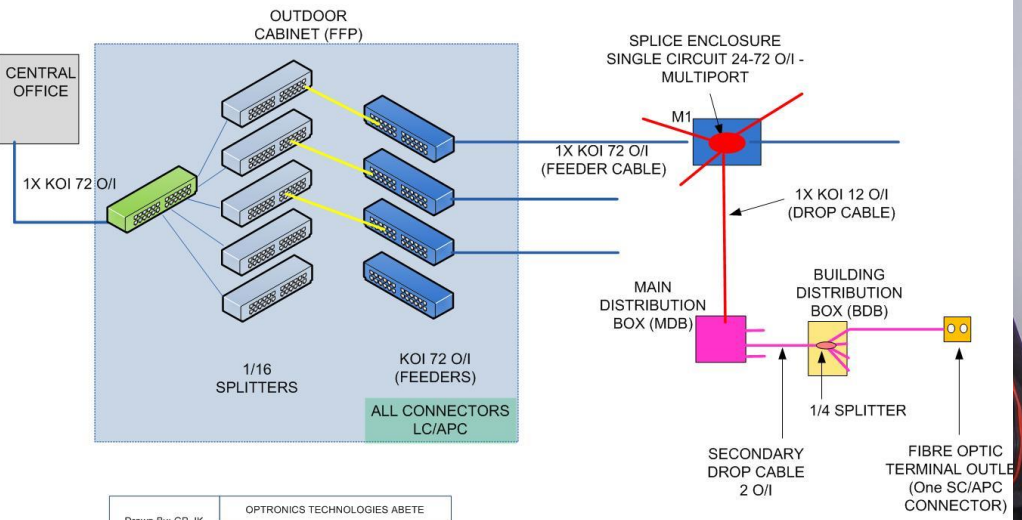
OPTRONICS Capabilities

OPTRONICS TECHNOLOGIES S.A.

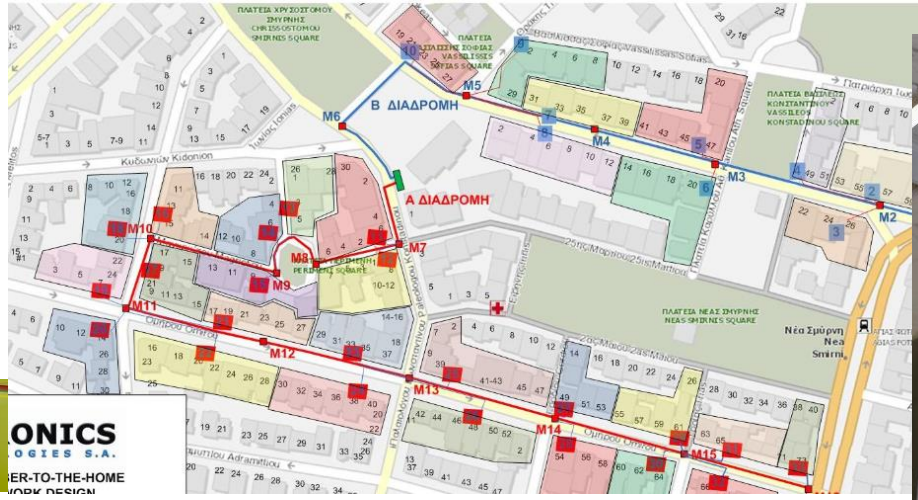
FTTH Ready!!!

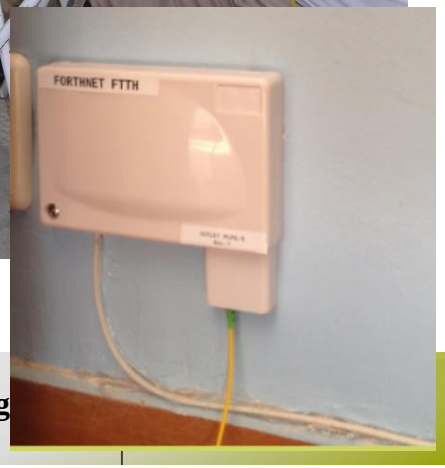
FTTH N. SMYRNH

FTTH TWO-STAGE PON ARCHITECTURE



Drawn By: GP, IK	OPTRONICS TECHNOLOGIES ABETE			
	FTTH ARCHITECTURE			
Approved By: GP	SIZE	FSCM NO	DWG NO 1	REV
Date: 23.7.2012	SCALE		SHEET	1 OF 1

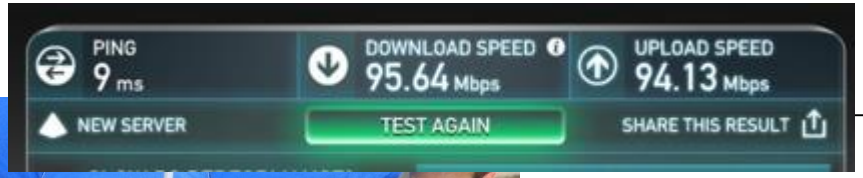




ONICS
LOGIES S.A.
ER-TO-THE-HOME
WORK DESIGN

OPTRONICS Capabilities

FTTH in ATHENS



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OPTRONICS Capabilities

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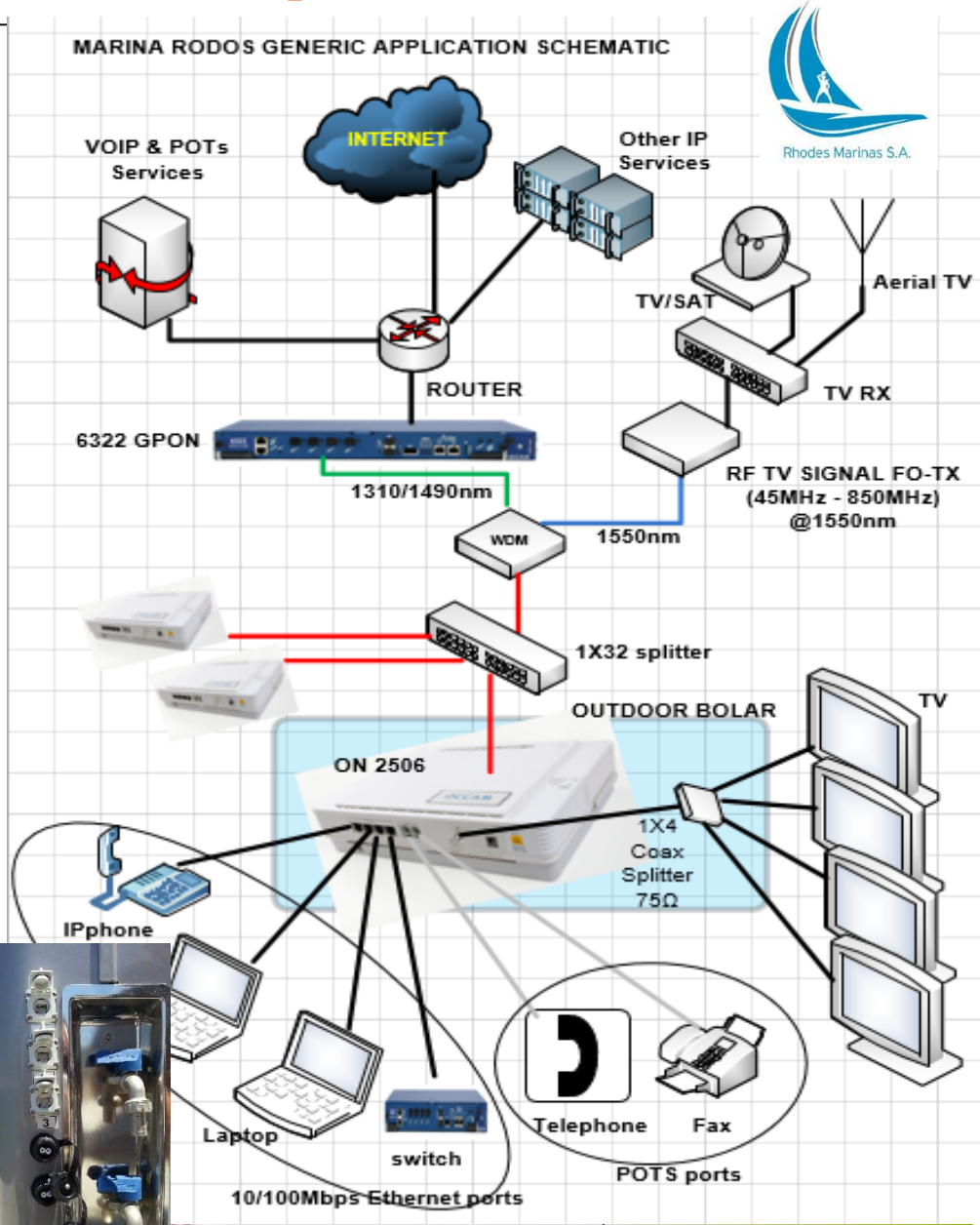
FTTH Ready!!!

MARFON MARINA PROJECTS GPON DESIGN & FTTBoat



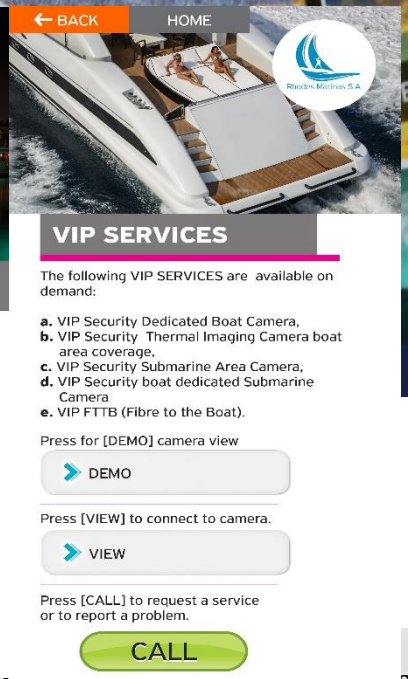
OPTRONICS Capabilities

FTTH Ready!!!

SERVICES PROVISION

- 100Mbps-1Gbps
- WiFi access
- FTTboat
- TV to the boat
- VIP CCTV

Guest Interface Design by Smart Phone App for guest facilities use and Rhodes travel content



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FTTH Ready!!!

END TO END SOLUTION

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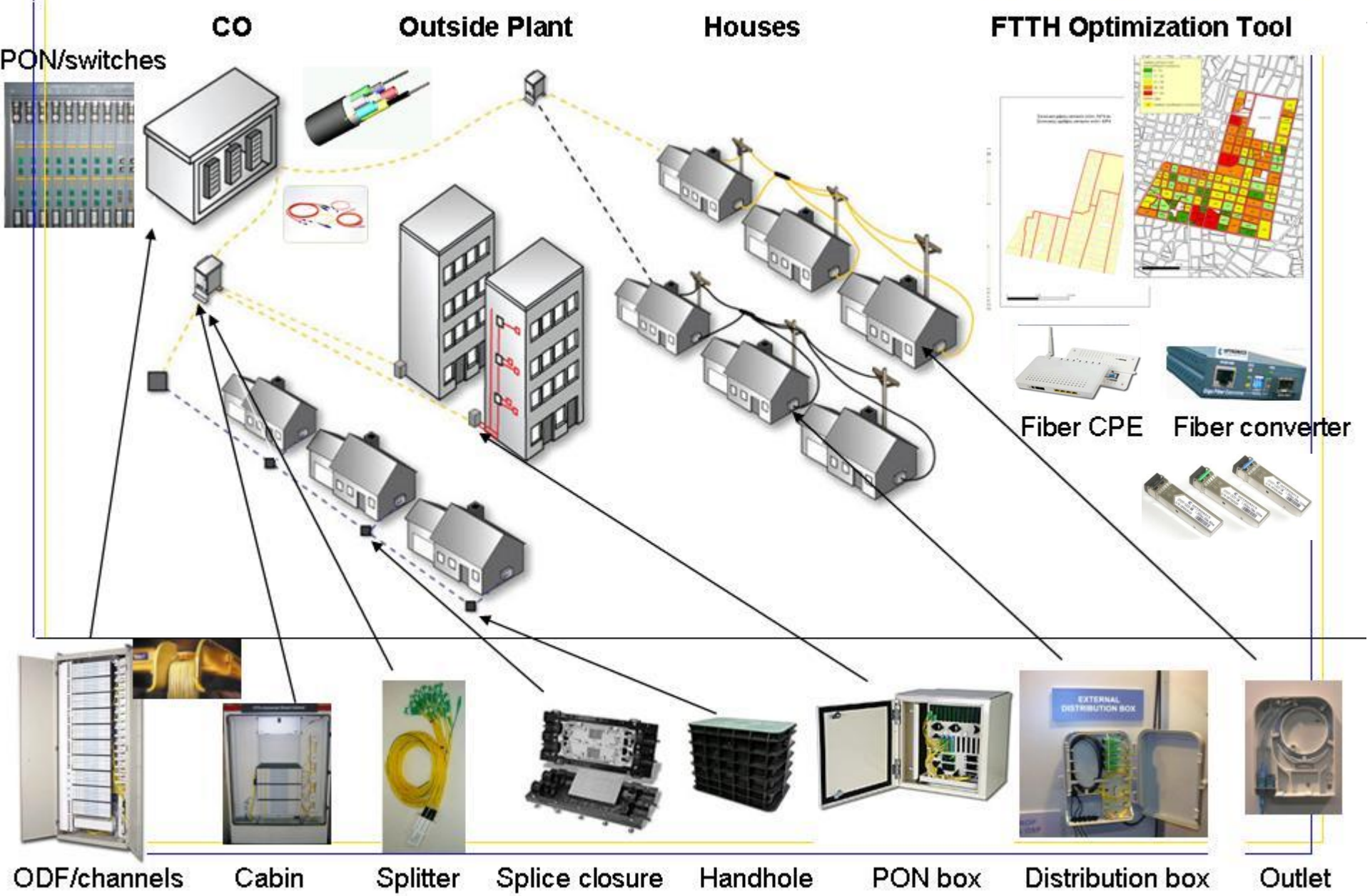


FTTH Architectures

FTTH Ready!!!

FTTH Network Topologies

Point-to-Point vs PON

For 32 subscribers

64 fibers/ 64 transceivers

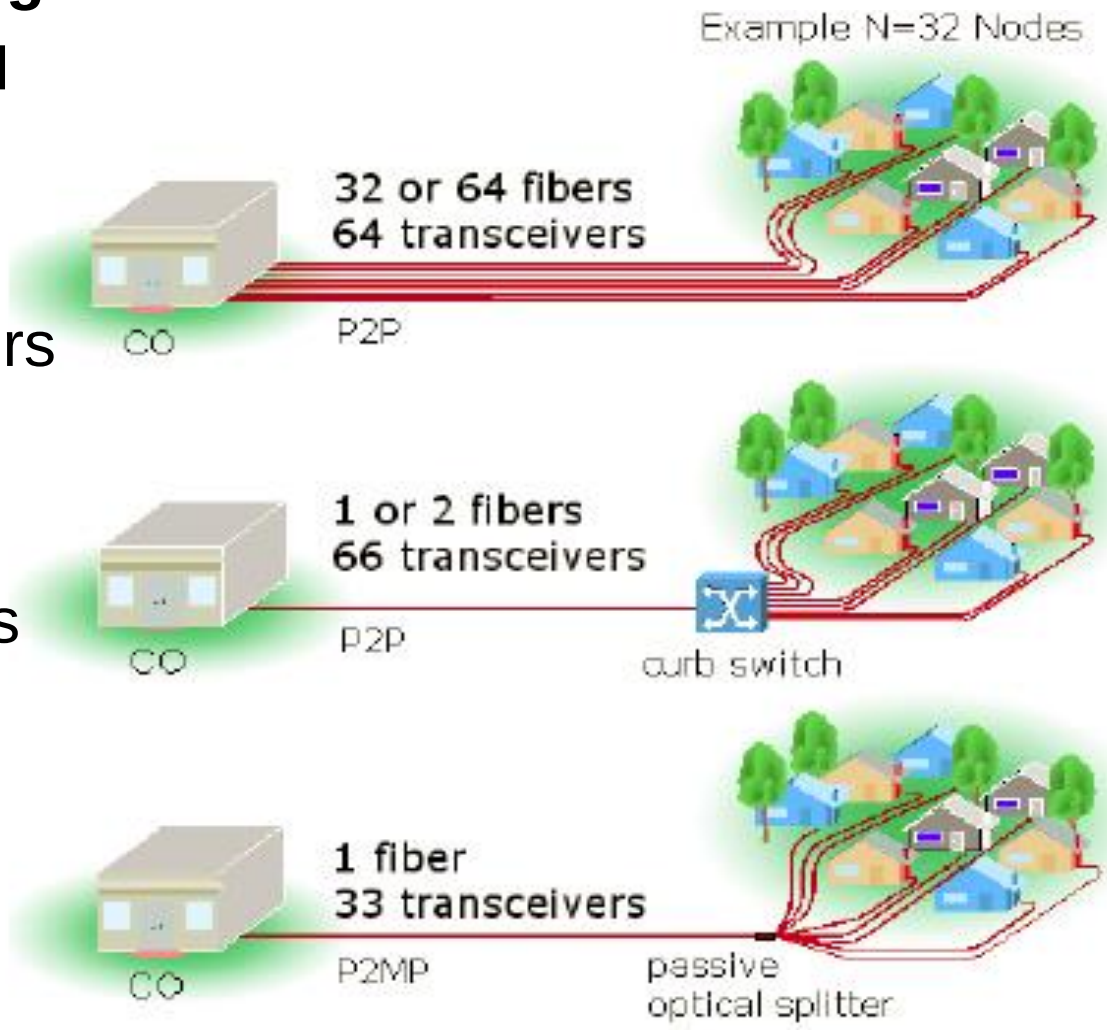
33 power supplies

2 fibers/ 66 transceivers

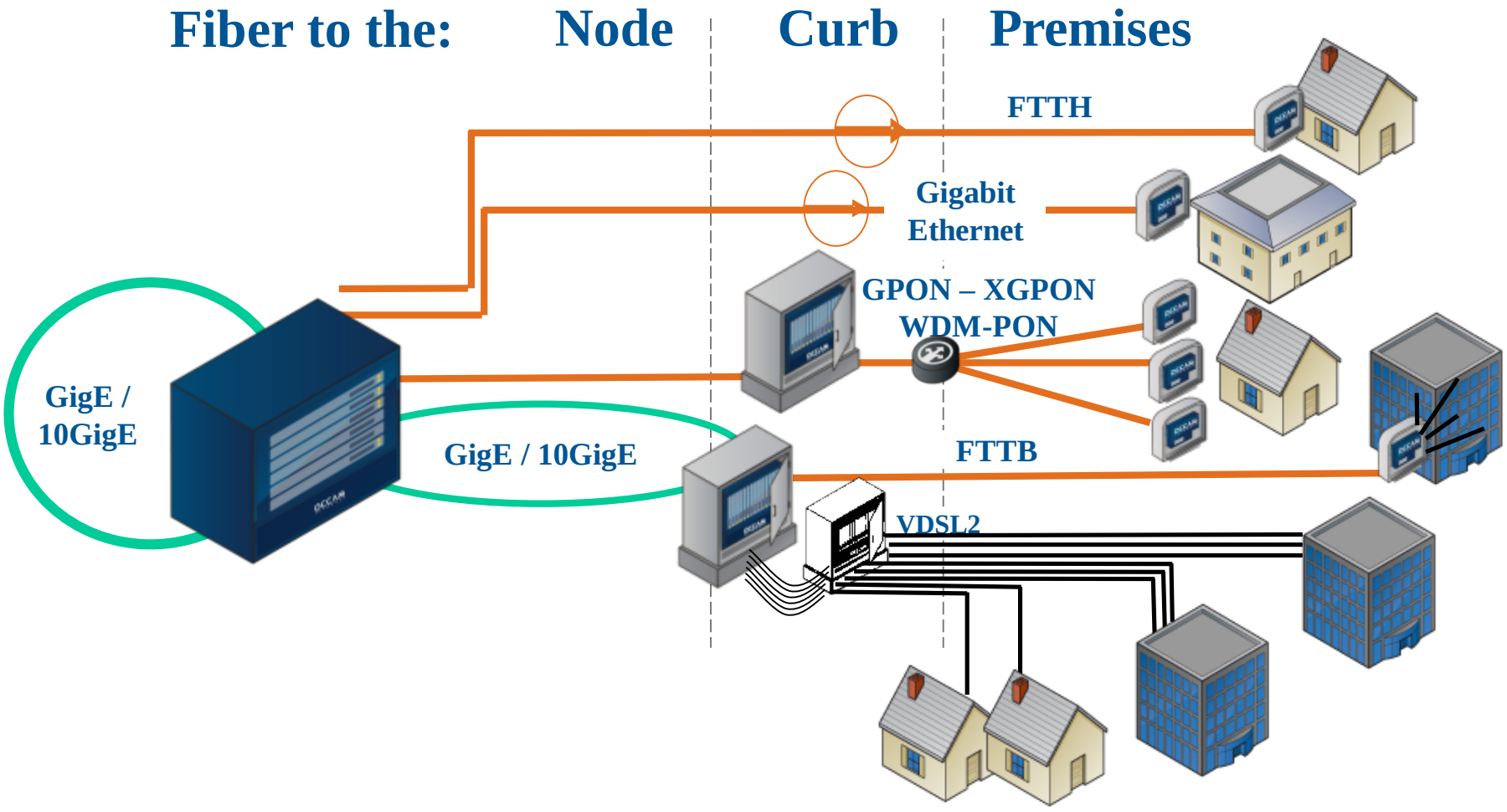
34 power supplies

1 fiber/ 33 transceivers

33 power supplies



Access Networks Architectures



FTTx Implementation

FTTH Ready!!!

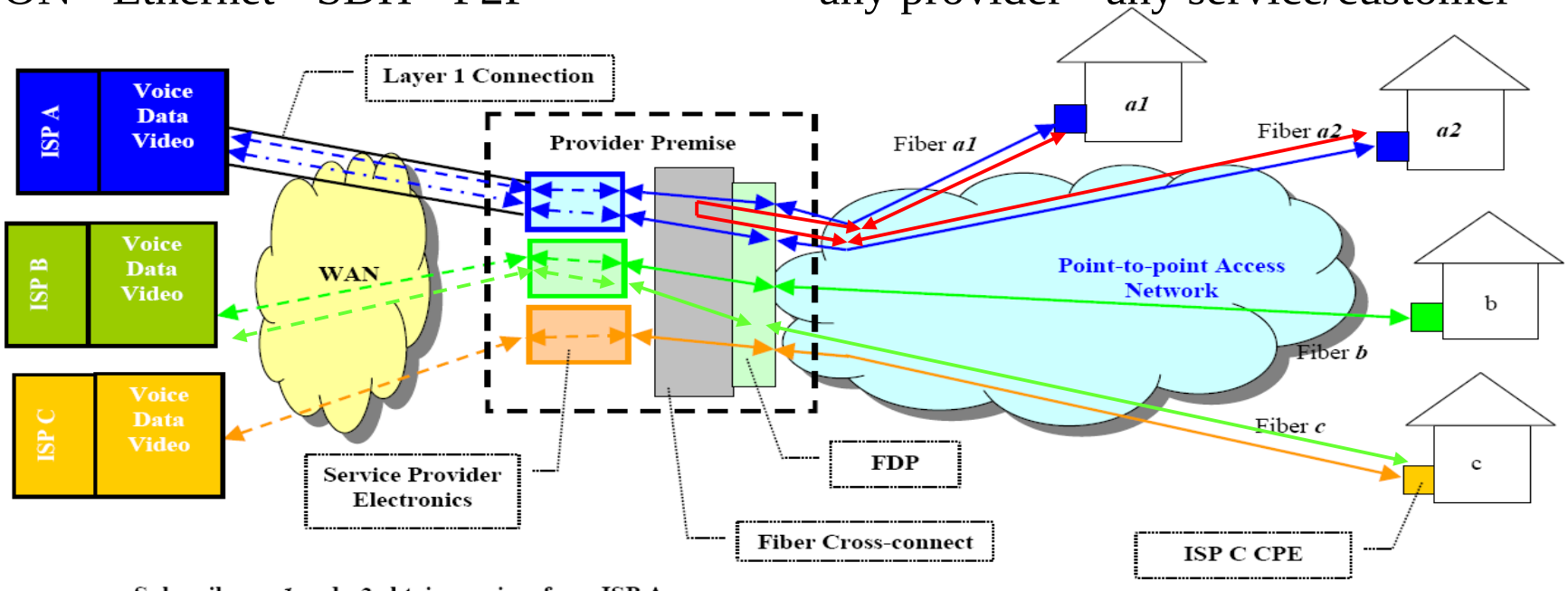
FTTH IMPLEMENTATION MODELS

Design based on CENELEC & ITU Guidelines

OPEN ACCESS MODEL & **OPEN SERVICE MODEL**

PON - Ethernet - SDH - P2P

any provider - any service/customer



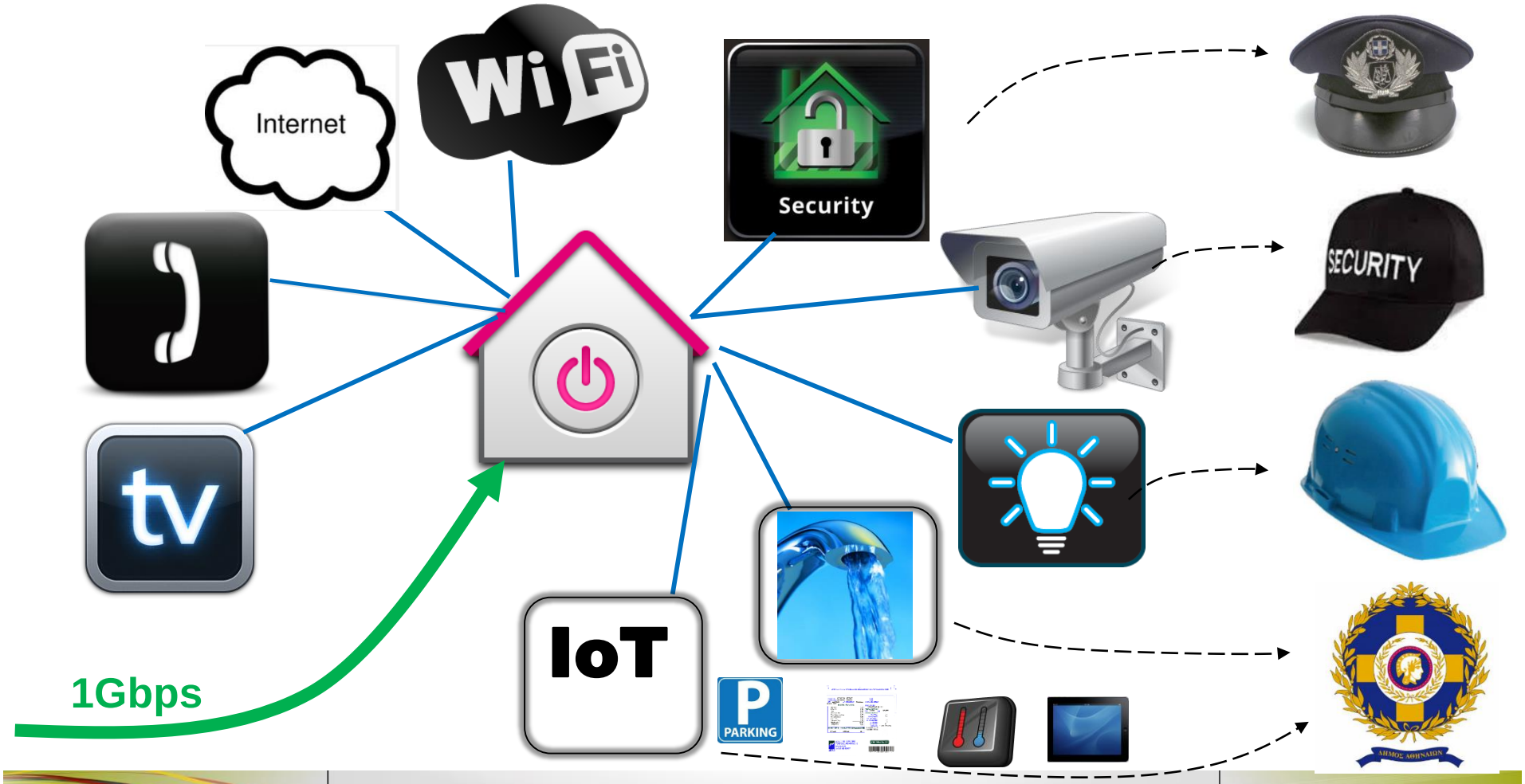
Subscribers *a1* and *a2* obtain services from ISP A
Subscriber *b* obtains services from ISP B
Subscriber *c* obtains video service from ISP C

Solid lines represent fiber connections
Dashed lines represent logical connections

Operations Management

FTTH Ready!!!

Broadband services & BMS controls



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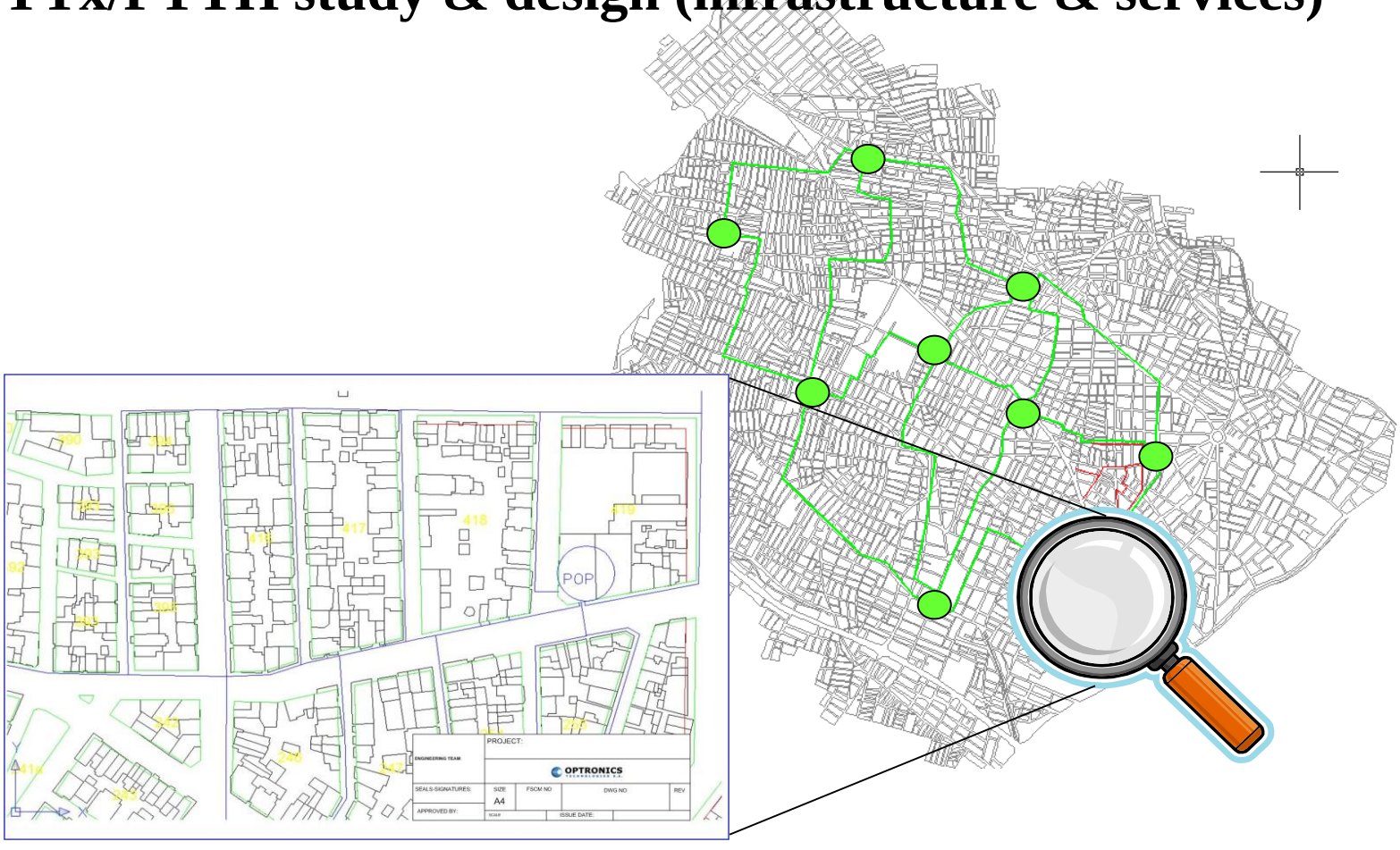
FTTx Study & Design

FTTH Ready!!!

FTTx/FTTH study & design (infrastructure & services)



FTTx Study & Design

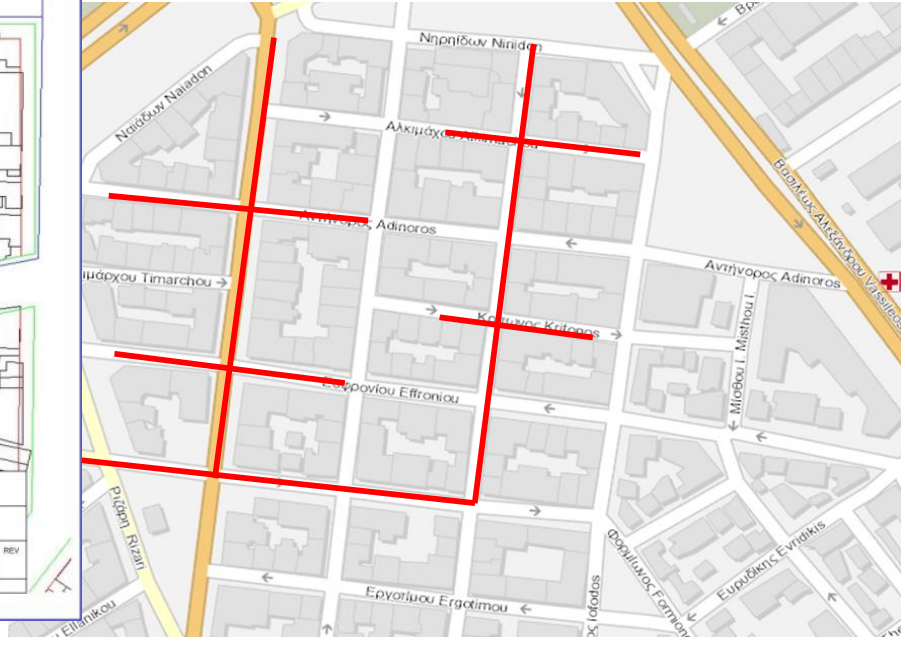
FTTH area …?……..... (urban, dense urban)

Houses passed …?…….. (e.g. 1.000 -10.000 -1M)

Infrastructure …?…… (e.g. 300 – 3.000 houses connected, i.e. 30%)

Distribution points …?… (e.g. 3-4 points)

Services …?……. (e.g. IPTV , HDTV, P2P, Super Bandwidth Internet for live stream, BMS)



FTTx Projects

How it is done!!

- Find Demographics
- Analyse Demographics & define the area & houses
- Analyse Maps
- Do site surveys - Analyse Photos (& 360 degrees videos)
- Measure meters – cables – splitters – distribution points
- Measure end users
- Design architecture, define project target values - KPIs
- Create Project timeplan & BOM
- Calculate costs per route/building/home passed & connected
- Speak to the Mayor
- Analyse and manage project rollout
- Apply & get licenses
- Supply materials
- Install materials
- Connect customers
- Create Project Documentation

Project management

Network Project Planning
Licensing
Outside Plant Construction
Intra-building Networks evaluations
Outside plant material
Network maintenance

26 years

OPTRONICS

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Thank you for your attention

al-FTTH Ready!!!