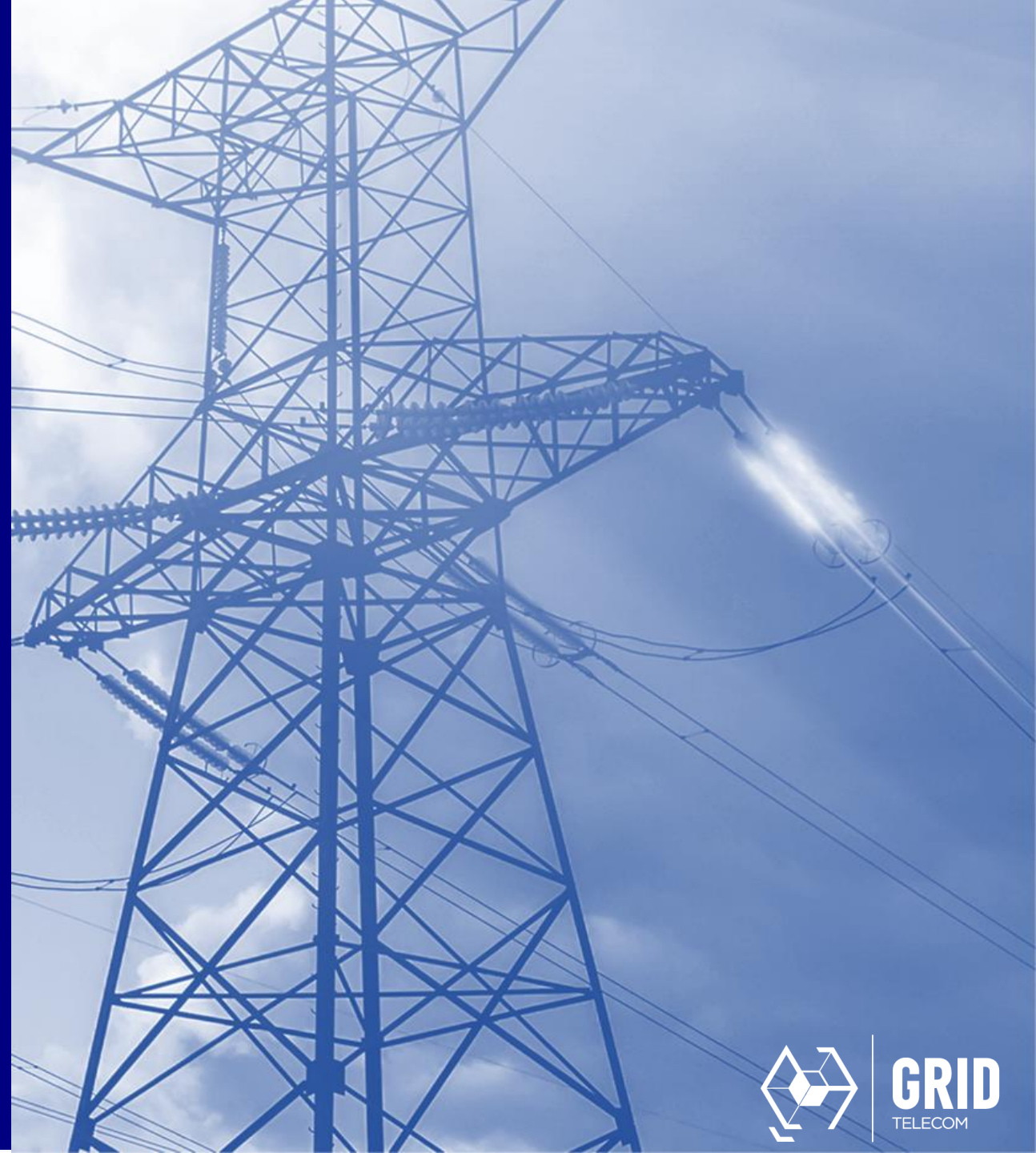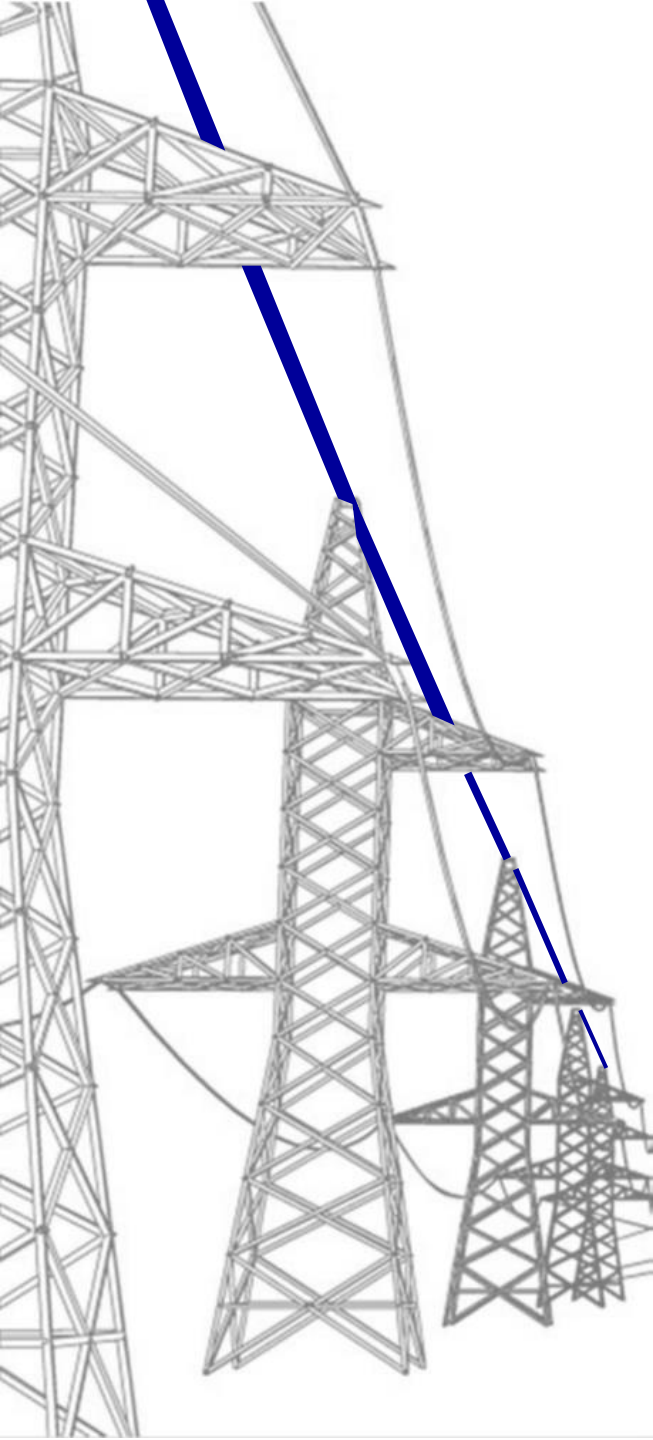# Company Presentation

GRID
TELECOM

Company Profile

o GRID-TELECOM established in January 2019

o 100% subsidiary of IPTO (Independent Power Transmission Operator)

o IPTO's vehicle for providing telecom services to national and international operators

o Lean team of experts with significant experience in the Telecom market

Telecommunications Network

o Access to a continuously growing and extended backbone network of optical fibers

o Presence in the largest national Data Centers via on-net infrastructure

o Metropolitan area networks are under development by own founds

GRID TELECOM

Telecommunications Network

OPGW (Optical Ground Wire)

Dual functioning cables:

1. Grounding of the power transmission lines

2. Contains multiple optical fibers

Network footprint

o Fiber optic network (terrestrial and submarine) exceeds 4.000km throughout Greece

o Reaching already all neighborhood countries

o The expansion of the fiber optic network will exceed 6.000Km throughout Greece in the next years

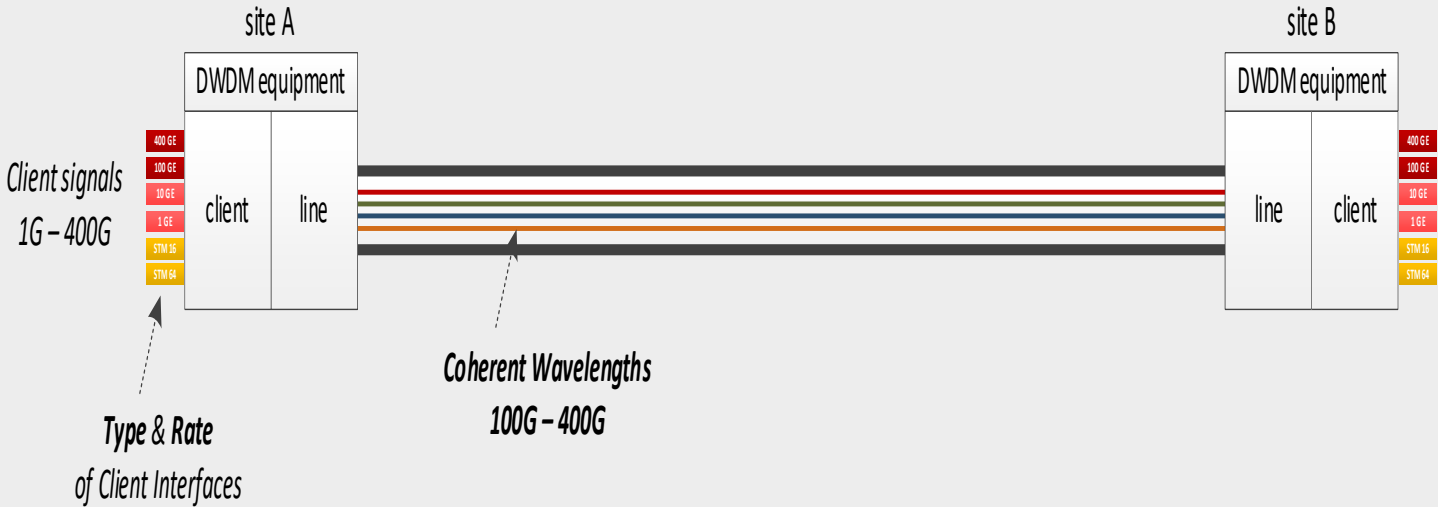o Grid Telecom's own network is planned to expand in the Balkans

Network Topology

Services

- ➢ **Wavelength**

  - ✓ Point to Point
  - ✓ Interfaces 1 G – 400 G
  - ✓ Protected / Unprotected

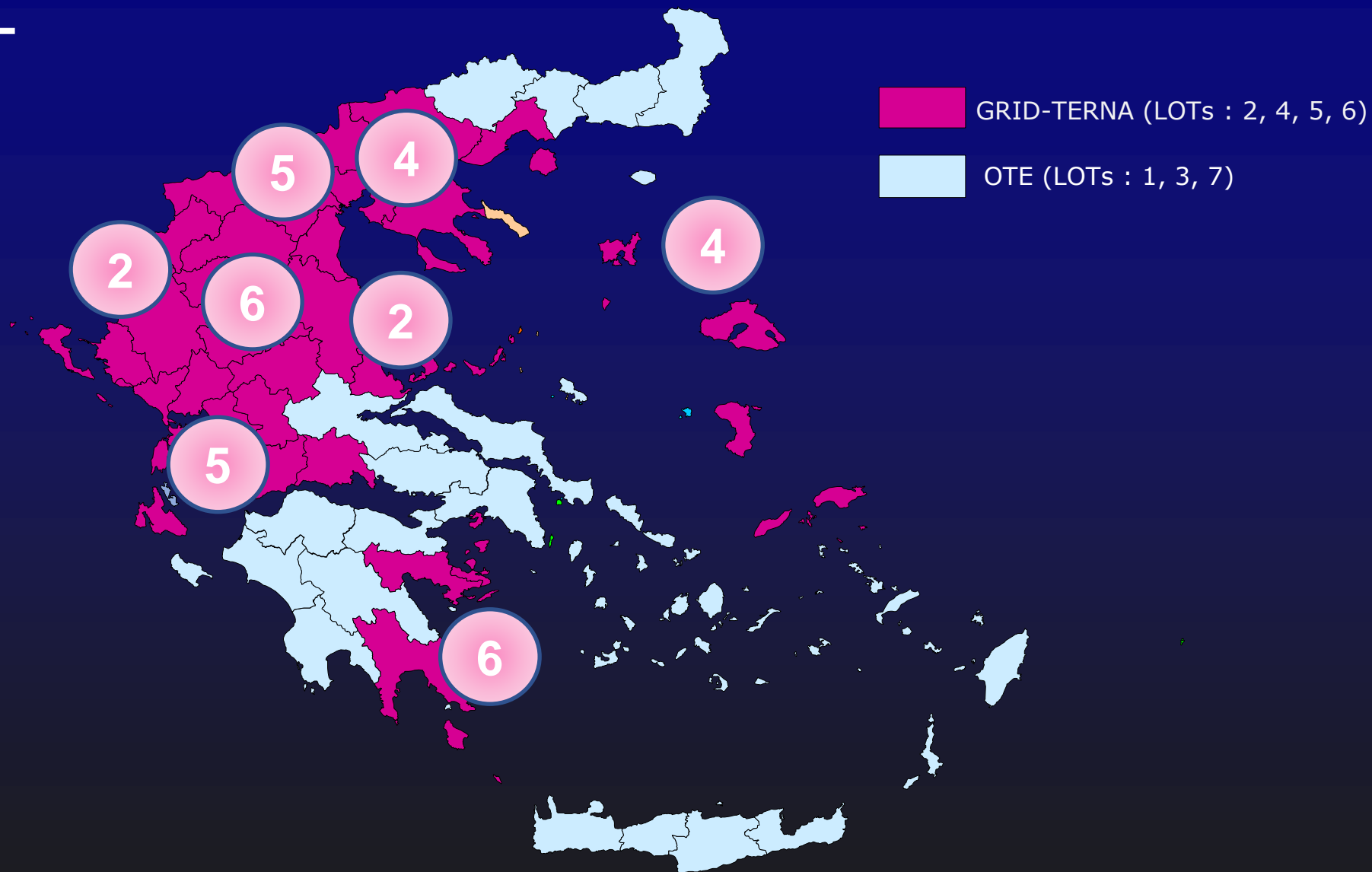- ➢ **Ethernet**

  - ✓ E-Line / Point to Point EVC
  - ✓ E-Lan / Rooted Multipoint EVC
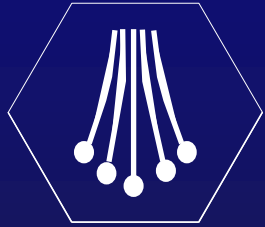 - ✓ E-Tree / Multipoint to Multipoint EVC

- ➢ **NOC 24X7X365**

site A

DWDM equipment

Client signals
1G – 400G

400 GE
100 GE
10 GE
1 GE
STM 16
STM 64

client | line

Type & Rate
of Client Interfaces

Coherent Wavelengths
100G – 400G

site B

DWDM equipment

line | client

400 GE
100 GE
10 GE
1 GE
STM 16
STM 64

Client Protocol	Physical port
OTH	OTU1, OTU2, OTU2e, OTU3/OTU3e, OTU4
Ethernet	FE, GigE, 10GigE WAN, 10GigE LAN, 40GigE, 100GigE, 400GigE
SDH	STM-1, STM-4, STM-16 and STM-64, STM-256
SAN	FC100/FC200/FC400/FC800/FC1200/FC1600
Video Interfaces	DVB-ASI/SDI/HDTV, (HD-SDI)/ 3G-SDI
Other	Mix service card (TDM & IP); Alien Lambda interface

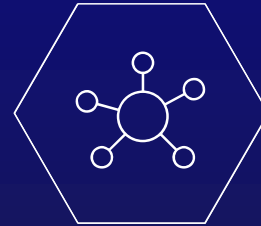**GRID** TELECOM

Services

Provision of Dark Fiber through IPTO's terrestrial and submarine network infrastructure combining Grid-Telecom's terrestrial network part

High-speed capacity services (nx10G and nx100G) via a state-of-the-art DWDM network accompanied by High Availability Service Level Agreements
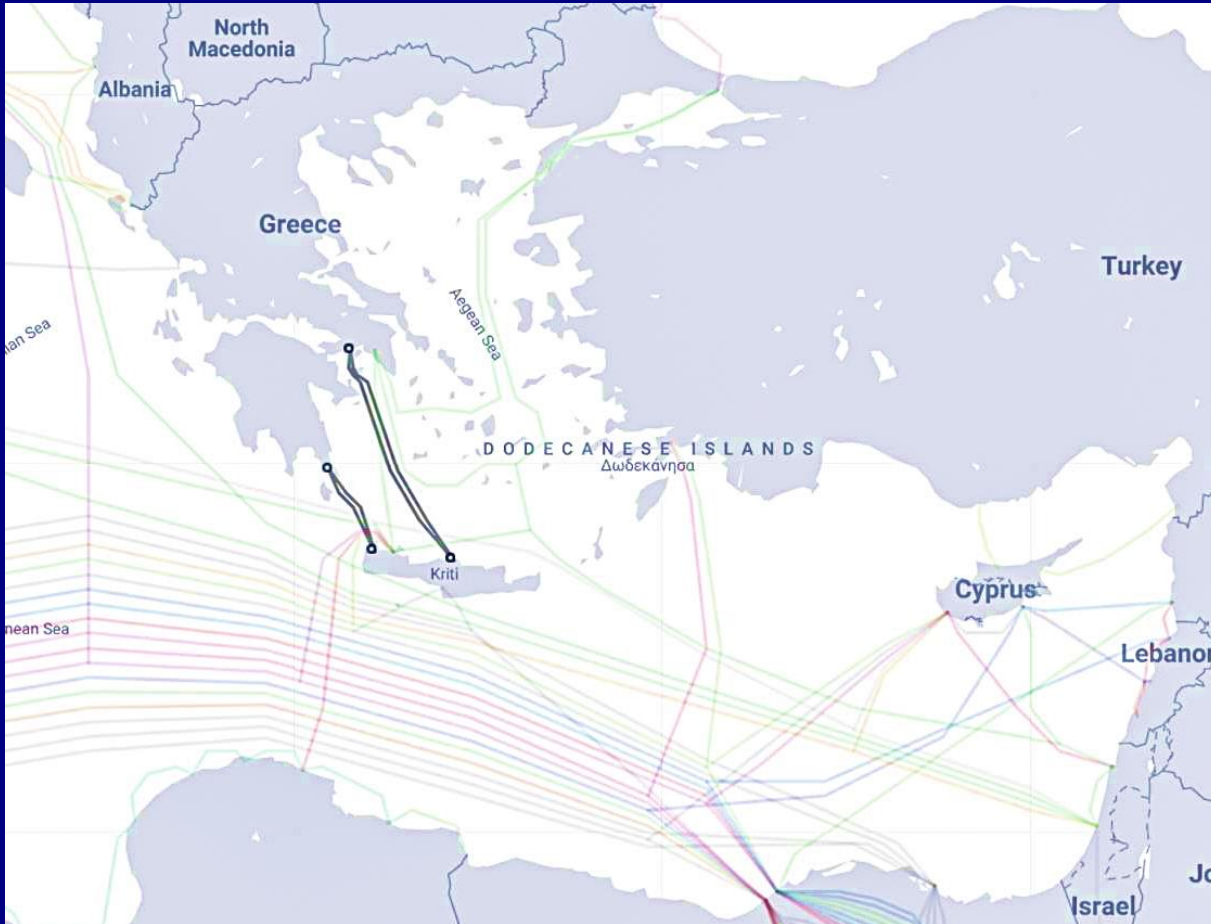
Collocation services in IPTO's High Voltage Centers, Substations and on the Transmission Towers throughout Greece.

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Grid Telecom establishes Crete as a strategic hub in the Med

Minoas East and West

⏎ Copy link

RFS
2021

Cable Length
270 km

Owners
Grid Telecom

URL
https://www.grid-telecom.com/

Notes
Minoas East and West are fiber optic cables attached to power cables. Minoas East was RFS in December, 2021. Minoas West was RFS in May, 2021. Each leg is 135 km in length, for a total of 270 km of fiber optic cable.

Landing Points
Neapoli, Greece
Nopigeia, Greece

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Apollo East and West

⏎ Copy link

RFS
2024 Q2

Cable Length
670 km

Owners
Grid Telecom

URL
https://www.grid-telecom.com/

Notes
Apollo East and West are fiber optic cables in parallel (but not attached) to power cables. Each leg is 335 km in length, for a total of 670 km of fiber optic cable.

Landing Points
Korakia, Greece
Pachi, Greece

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<u>Telegeography Submarine Cable Map</u>

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Cable Landing Stations and Data Centers

- The island of Crete is fast developing into an important telecommunications hub and a data access point for the **BalkanMed** region. Telecom Italia Sparkle and OTEGlobe already operate cable landing stations.

- New additional Tier-III data centers have been announced by GRNET (Knossos-II), Interxion's and Lancom (Balkan Gate Crete) to take advantage of the emerging BalkanMed telecommunications corridor.

- Major subsea cable systems crossing the Med, such as TEAS, BLUE, MEDUSA και IEX have already chosen to land on the island of Crete and others such as 2AFRICA, AFRICA-1, SMW6, etc. are seriously examining the possibility.

3rd Party Data Centers

Grid Telecom CLS

new subsea cable systems

Google

GRID

Grid Telecom's Cable Landing Station in Crete

- Grid Telecom's Cable Landing Station (CLS) on the southern coast of Crete will anchor new international subsea cable systems crossing the Eastern Mediterranean, connecting Greece and the BalkanMed region with other East and West destinations.

- The CLS will provide secure housing for the Power Feeding Equipment (PFE) and Submarine Line Terminal Equipment (SLTE), as well as carrier-hosting services and facilities for the interconnection with backhaul terrestrial and subsea networks.

Indicative

GRID TELECOM

Grid Telecom Points-of-Presence

- Grid Telecom will provide diverse and highly reliable backhaul network to existing and new data centers on the island of Crete, the Greek mainland, as well as Italy, the Balkans, and Central Europe, providing a paradigm for creating a new carrier neutral hub in the broader **BalkanMed** region.

- The partnership of Grid Telecom with prospective subsea cable operators will provide wholesale customers with **open-access** interconnection with leading edge data connectivity and international reach to Southeast Europe and beyond, supporting the implementation of new international alternative routes.

The IONIAN System

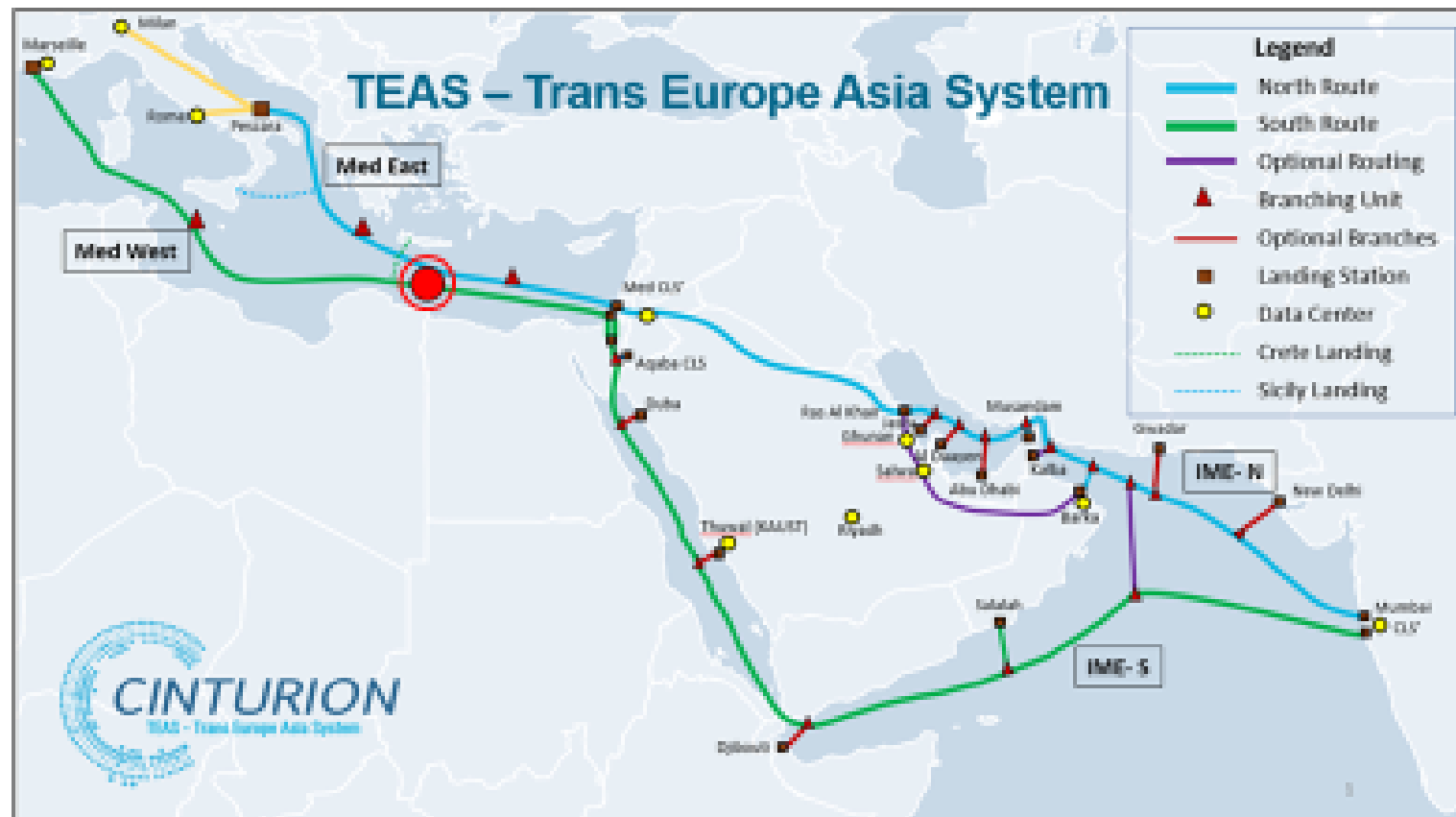

- Grid Telecom and Islalink have signed a 25-year agreement on the expansion of the terrestrial backbone network of the **IONIAN** subsea cable that connects Italy and Greece. On the Greek side, the 320 km cable of Islalink will be supplemented by a 1,000 km network of Grid Telecom, which connects Preveza with Athens and then with Thessaloniki.

- The cooperation provides critical broadband infrastructure between Greece – Italy with an additional capacity of 360 Tbps. The **IONIAN** system will contribute to the emergence of Athens and Thessaloniki as major regional hubs, giving rise to new investments in digital infrastructure.

Greece – Egypt Connectivity

❑ Grid Telecom and Telecom Egypt have signed "Heads-of-Agreement" to connect Greece and Egypt by extending a branch to the island of Crete from major subsea cable systems, laid across the Med Sea.

❑ The connectivity between Egypt and Greece will serve the data traffic between Africa, Asia and Europe creating a new reliable corridor interconnecting the three continents. It will be the shortest possible path crossing the Med to reach the Balkans region & other destinations like Genoa and Marseilles

TEAS – Trans Europe Asia System

- Cinturion has signed a "Heads-of-Agreement" with Grid Telecom to be its **Landing Party** partner in Greece, providing **open-access** interconnection and international reach
- **TEAS** is enabling high-speed and secure connections, through two separate routes across the Med Sea, continuing with two paths inter-linking the Middle East, with multiple routes across the Arabian Peninsula, and a route through the Gulf of Aqaba and the Red Sea.

Interconnectors

- Interconnectors are cables that connect the electricity systems of neighboring countries, either terrestrially or under-the-sea, enabling excess power to be shared and traded between countries. These electricity interconnectors are also supplemented with optical fibers.

- IPTO, the parent company of Grid Telecom, is implementing with corresponding Transmission System Operators (TSOs) new interconnections with Italy and the Balkans (Albania, North Macedonia, Bulgaria, Turkey), as well as in the Med region.

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EuroAsia Interconnector

- The **EuroAsia Interconnector** is a leading EU Project of Common Interest (PCI), interconnecting the national grids of Israel, Cyprus and Greece, and creating a reliable energy bridge between Europe and Asia.

- The 2000 MW project aims to interconnect the transmission networks of Israel, Cyprus and Greece. The interconnector is to be 1,208 km long. In parallel, the **Quantum** subsea optical fiber cable system will be added to interconnect the three countries and beyond.

Conclusions

- Greece is taking the initiative to fast becoming a critical energy and telecommunications hub in the broader BalkanMed region.

- IPTO in partnership with neighbouring TSOs are interconnecting the future in the BalkanMed region by building critical infrastructure for tomorrow's electricity and telecommunications backbone networks

- Grid Telecom, is in a unique position to offer diverse and highly reliable fibre connections throughout Greece and beyond, leveraging its position as an emerging open-access carrier neutral connectivity node in the region.

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