

New fish in the Med: Subsea cable developments and the elevated role of Greece.

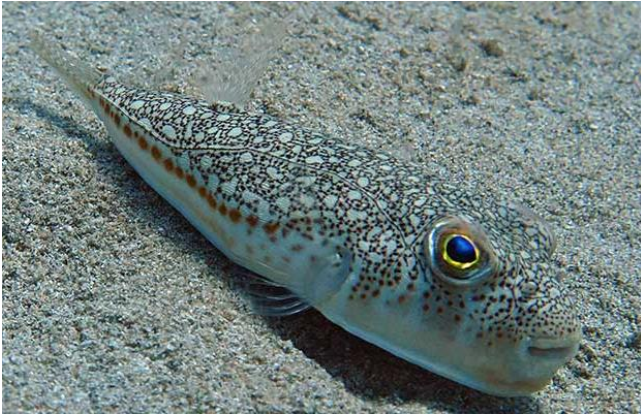
GRNOG 16, April 19th, Athens, Greece



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Human activity brings new fish in the Med



Lagocephalus scleratus

The species is common in the tropical waters of the [Indian & Pacific](#) oceans. It is a recent migrant into the eastern [Mediterranean](#) Sea, which it reached [through the Suez Canal](#), and it is spreading towards the western Mediterranean. It has been caught off the coasts of [Israel](#), [Turkey](#), [Cyprus](#), [Greece](#), [Malta](#), [Montenegro](#), [Adriatic](#), Strait of [Gibraltar](#) [...].

[Extremely poisonous](#) if eaten because it contains tetrodotoxin in its ovaries and to a lesser extent its skin, muscles and liver, which protects it from voracious predators. [...] This deadly substance causes paralysis of involuntary muscles, which may cause its victims to stop breathing or induce heart failure [...]

Source: Wikipedia

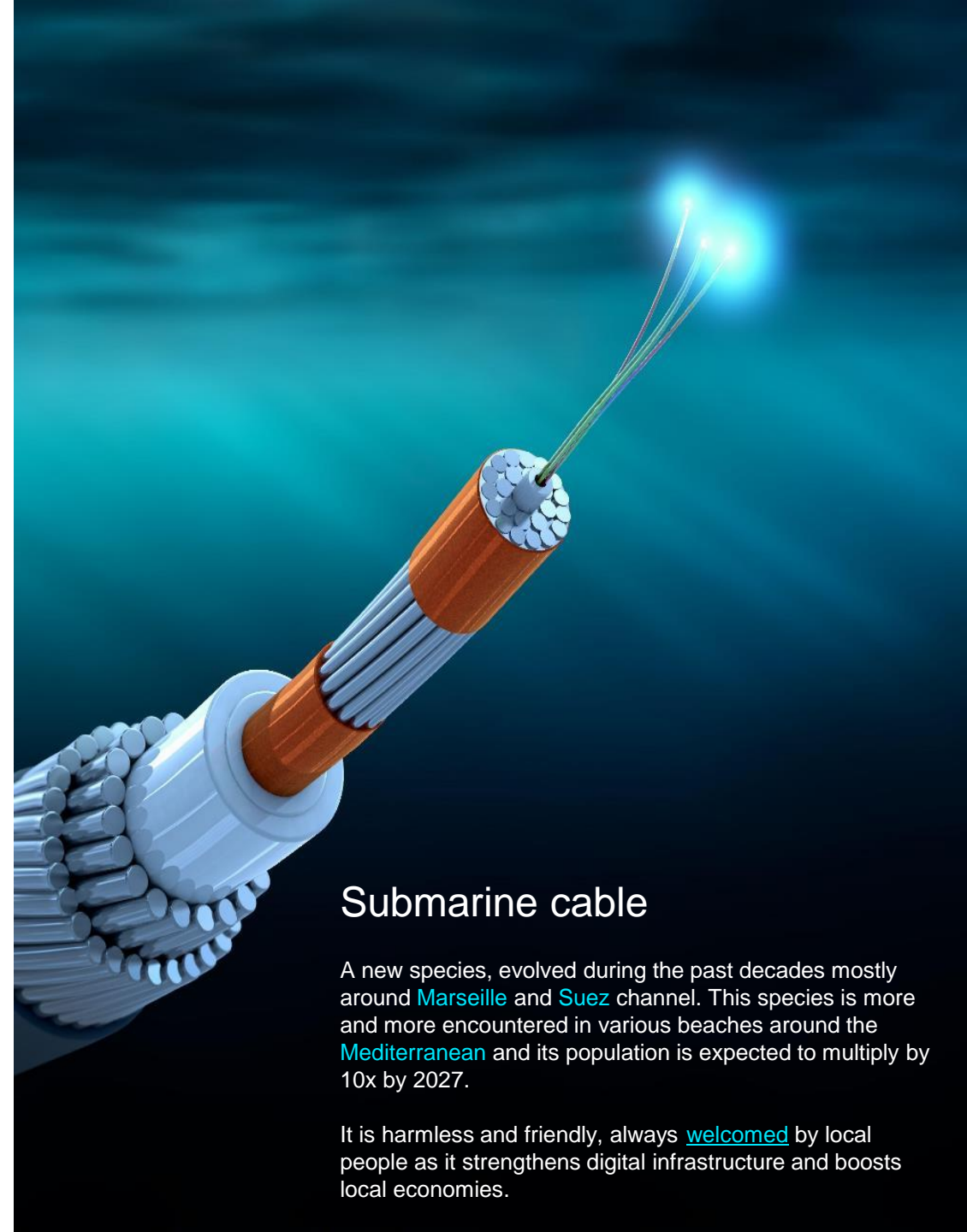


Pterois (Lionfish)

[...] Lionfish have also established themselves in parts of the [Mediterranean](#) - with records down to 110 m depth. [...] Warming sea temperatures may be allowing lionfish to further expand their range in the Mediterranean

Lionfish is a genus of [venomous marine fish](#), commonly known as lionfish, native to the Indo-Pacific. It is characterized by conspicuous warning coloration with red or black bands, and ostentatious dorsal fins tipped with venomous spines.

Source: Wikipedia



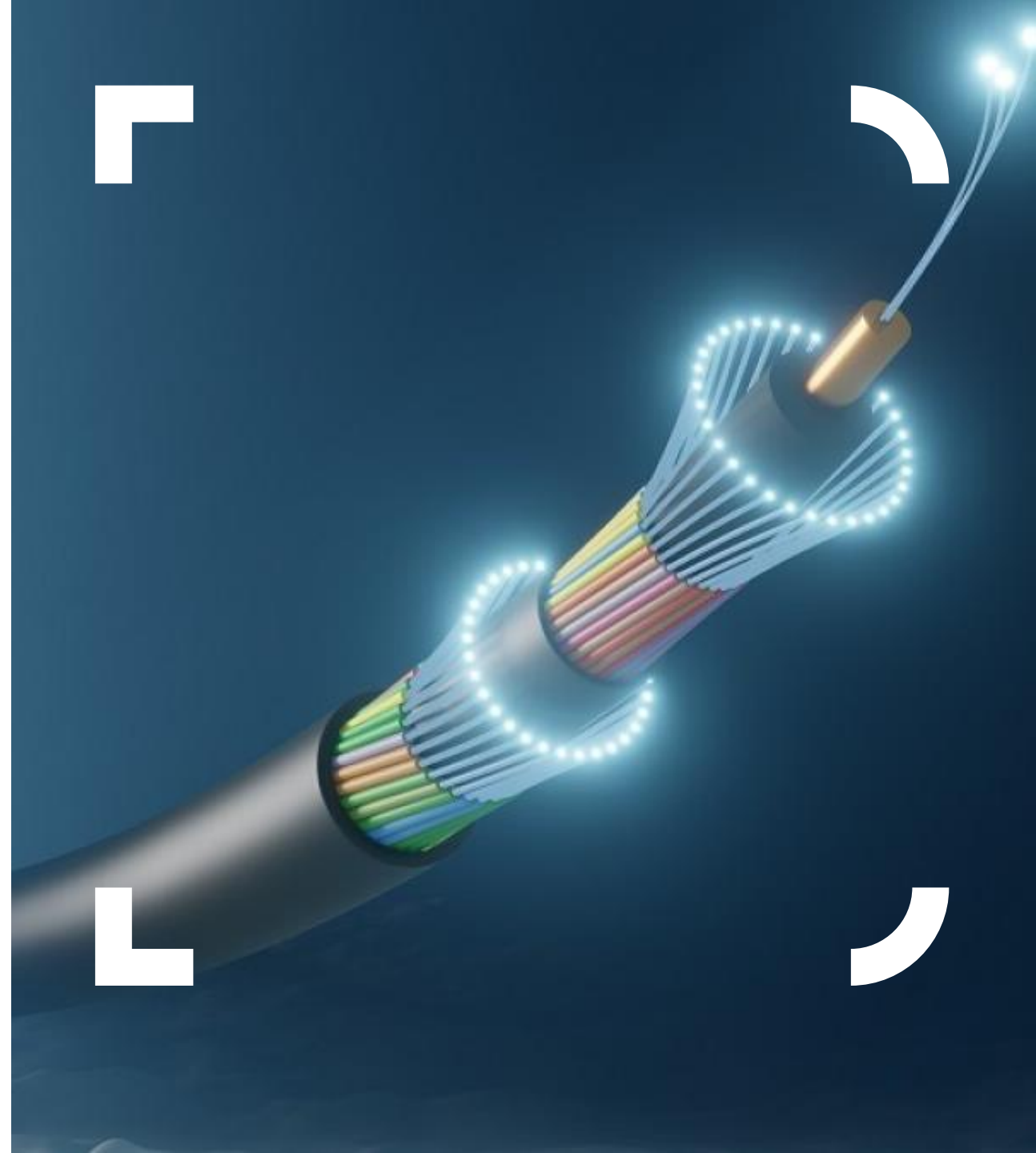
Submarine cable

A new species, evolved during the past decades mostly around [Marseille](#) and [Suez](#) channel. This species is more and more encountered in various beaches around the [Mediterranean](#) and its population is expected to multiply by 10x by 2027.

It is harmless and friendly, always [welcomed](#) by local people as it strengthens digital infrastructure and boosts local economies.

Contents

1. Developments in subsea cables at the Mediterranean
2. The new elevated role of Crete and Greece
3. Digital Realty's vision, strategy and investments



We are Proud to Deliver The Meeting Place for Companies, Technologies and Data

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| Houston | Seattle |
| Los Angeles | Silicon Valley |
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| | |
|------------|-----------|
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| Athens | Marseille |
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| Copenhagen | Stockholm |
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| London | |

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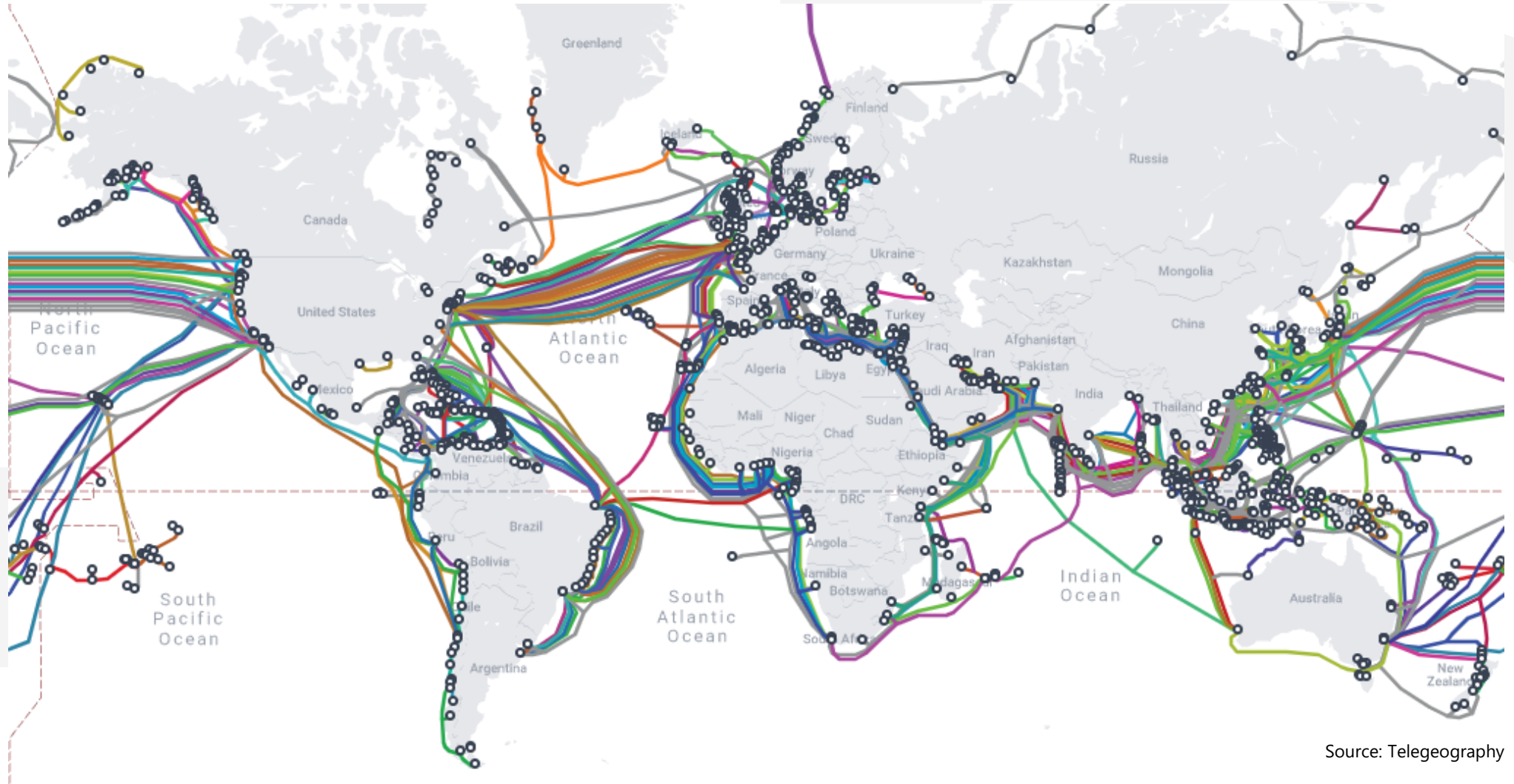


Subsea developments in the Mediterranean

...with a focus on Greece and Crete

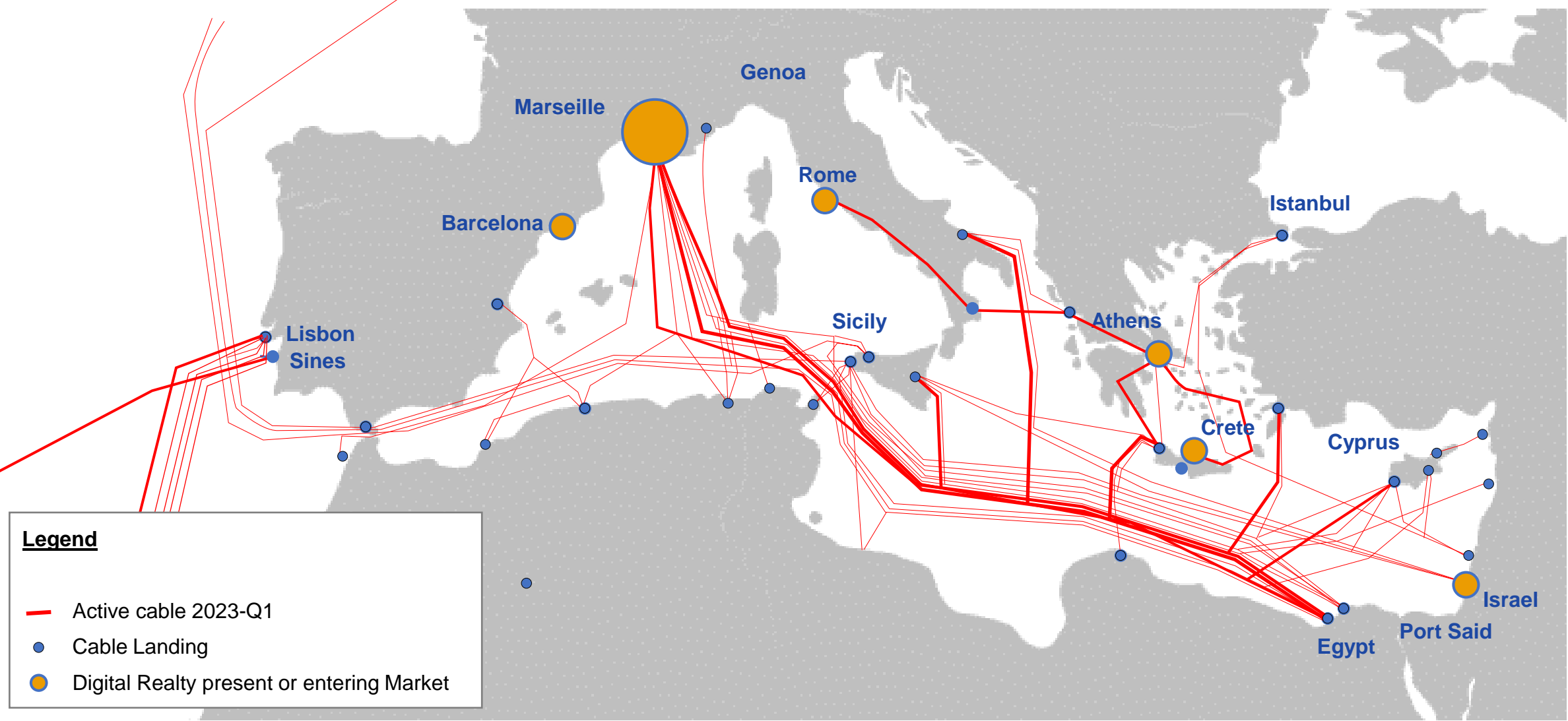
Submarine Cables

99% of intercontinental internet traffic flows via subsea cable systems

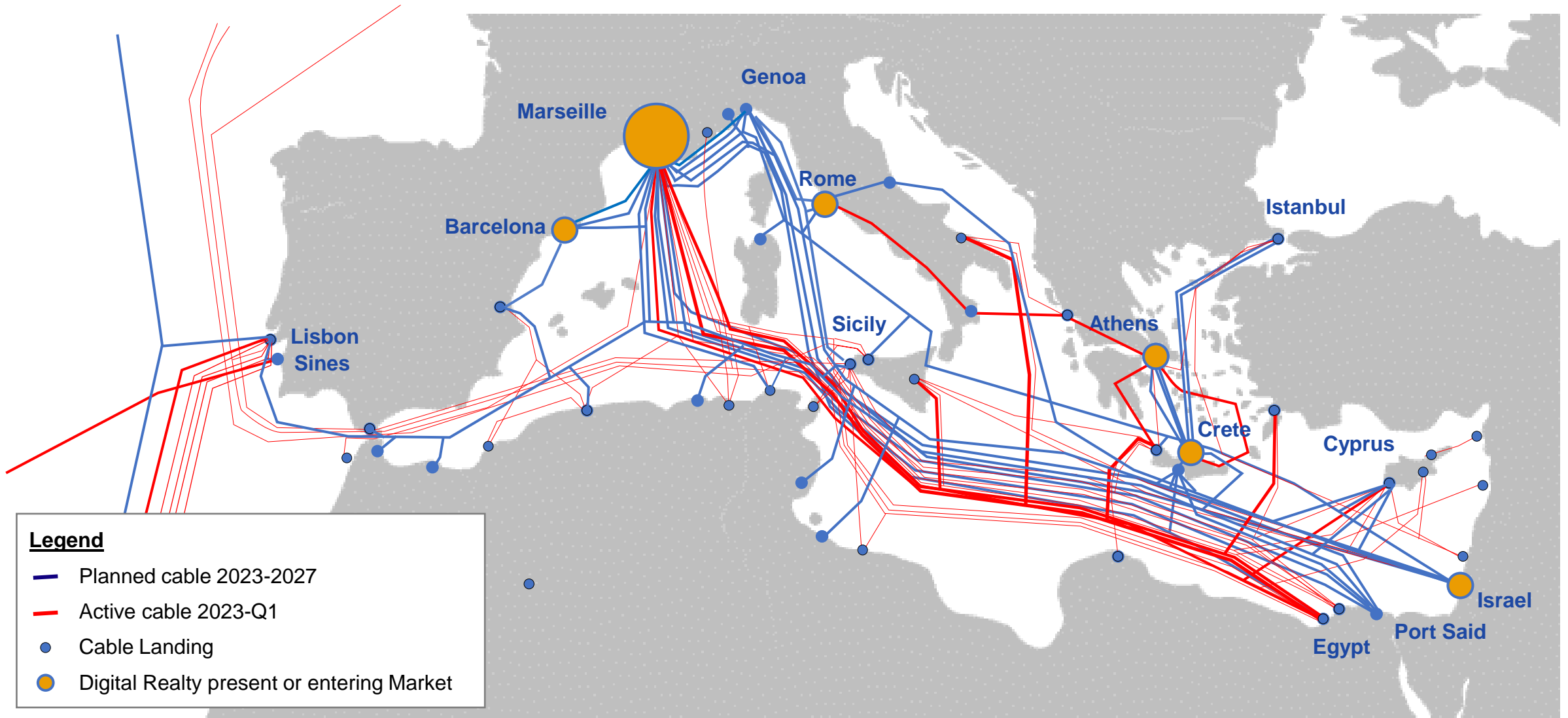


Source: Telegeography

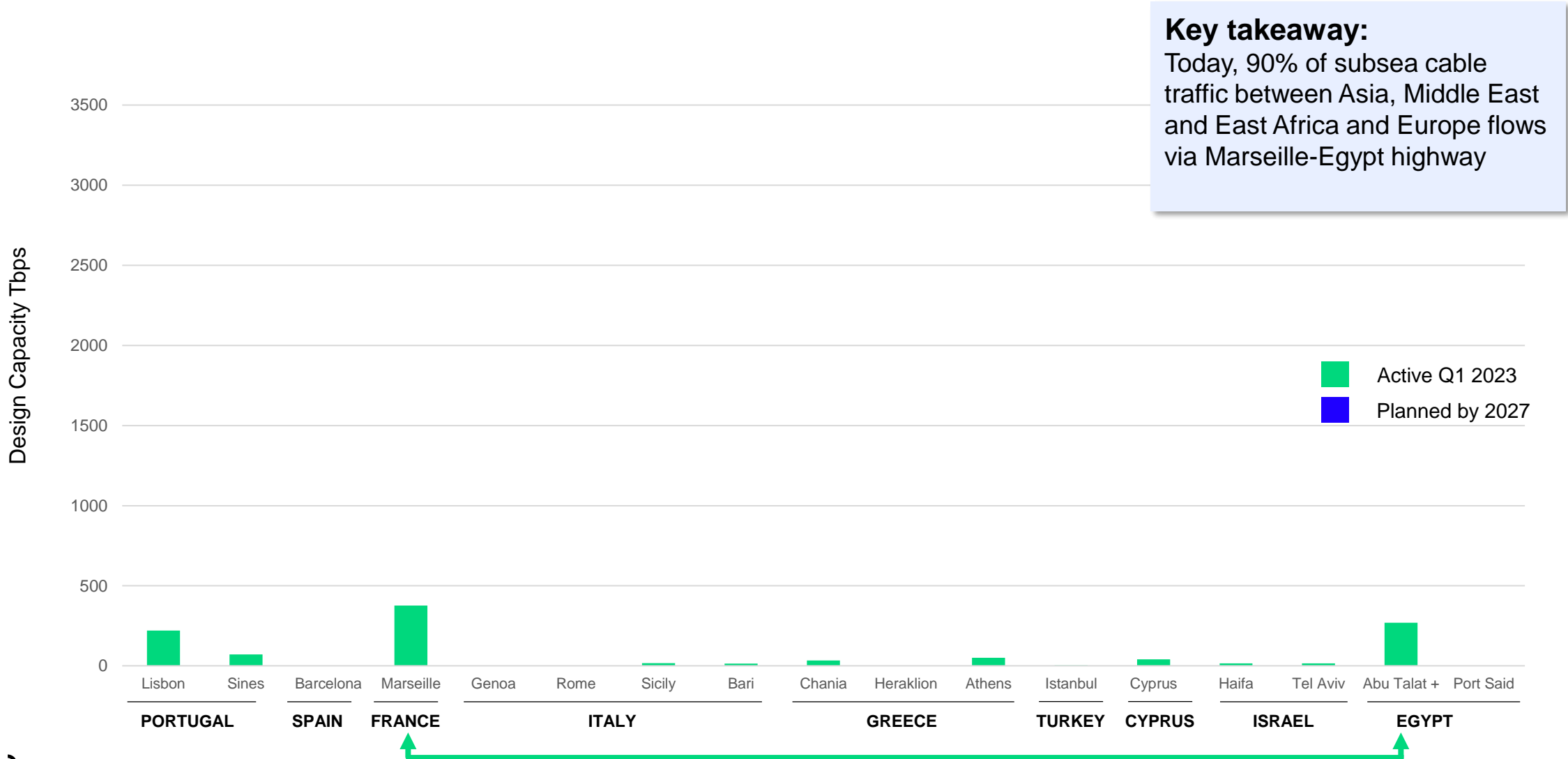
Subsea cables at Mediterranean, **active**



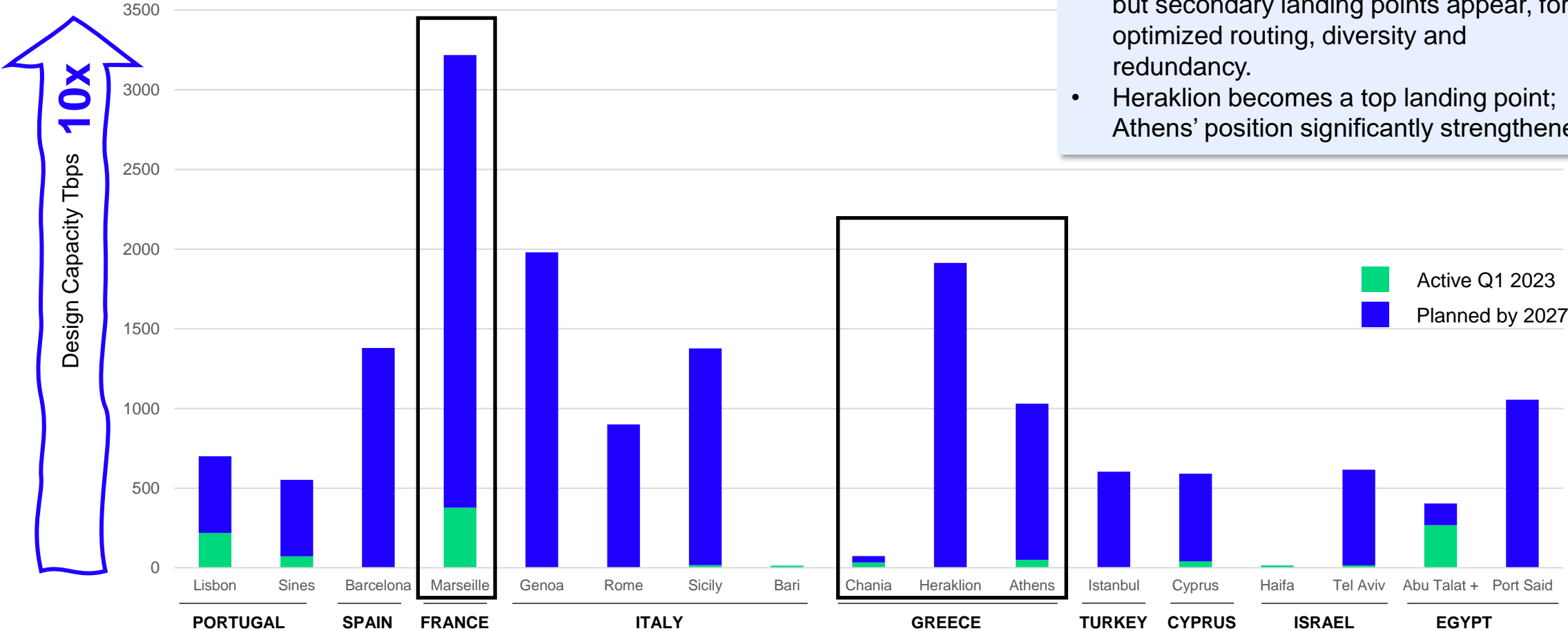
Subsea cables at Mediterranean, **active** and **planned**



Design Capacity of Med Subsea Cables, active

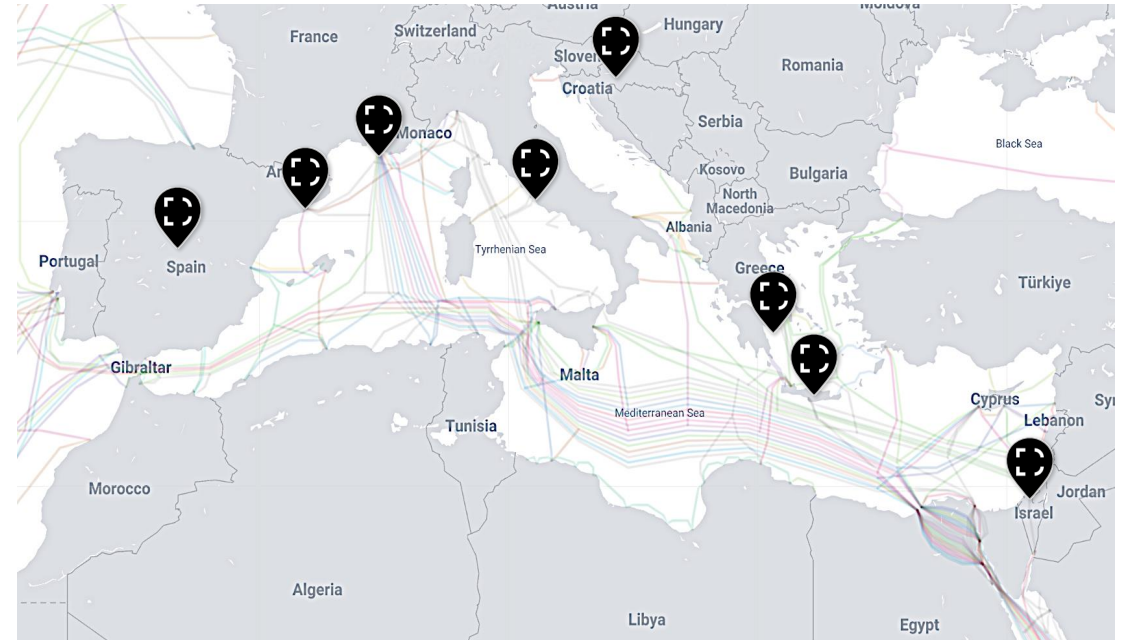


Design Capacity of Med Subsea Cables, **active** and **planned**



Digital Realty's Vision for the Mediterranean Region

Industry focus evolves from Marseille being the sole gateway of Europe towards ME, Asia and Africa, to the **Mediterranean becoming a holistic integrated subsea hub**, facilitating distributed workloads and providing numerous options for traffic exchange, capacity swaps and automatic failover solutions for various applications.





The hype for Heraklion as a transit gateway and a content hub.

Can we replicate the Marseille success story?

Marseille Success Story:

The chronicle of the evolution from a transit location to a cloud and content hub

Marseille Data Centre growth Driven by Subsea Cable Evolution

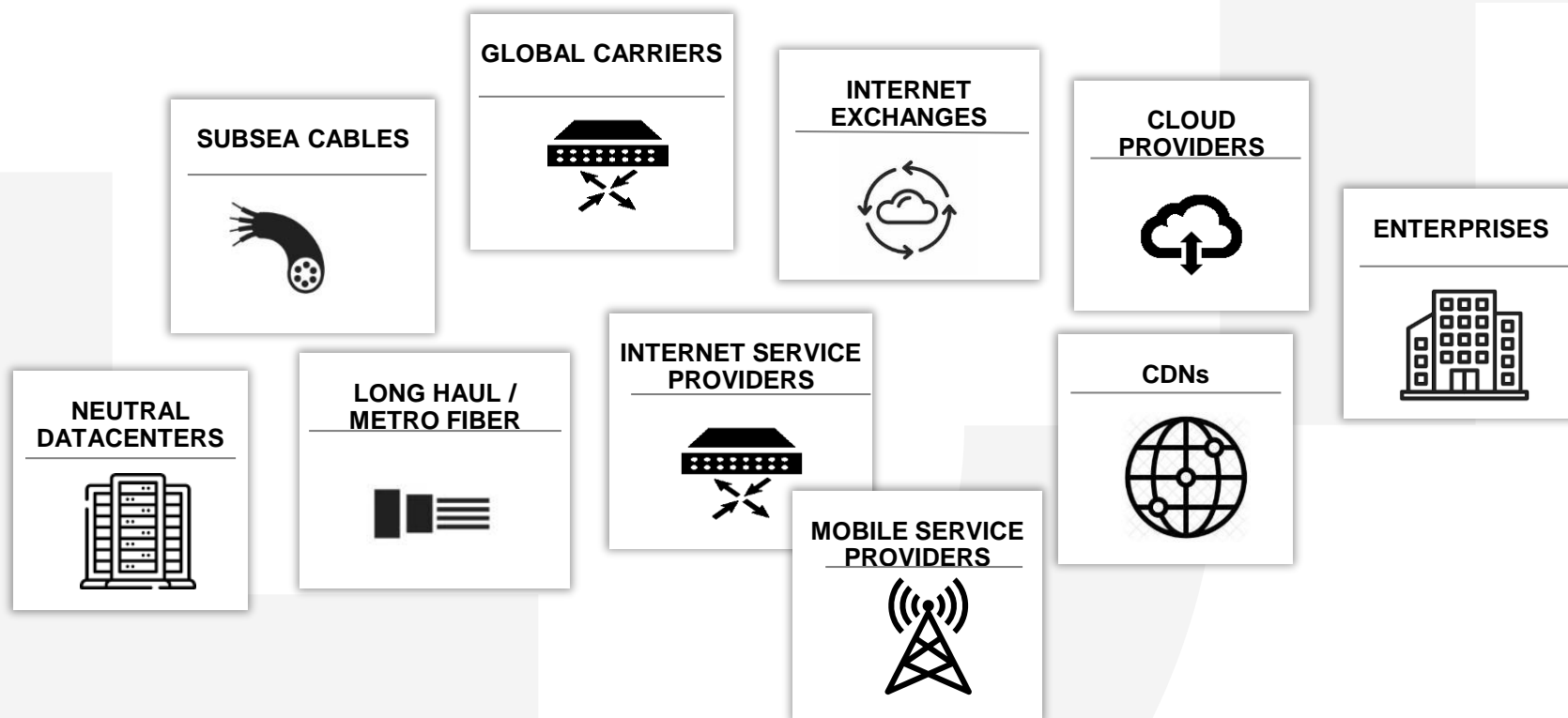
2014
**Strategic
Transit site**
2MW
1 data centre

2022
**Interconnection
Hub**
46 MW
4 data centres

2025
**Cloud and
Content Hub**
70-100 MW
6+ data centres

| No of Subsea Cables | 11 | 15 | 22 |
|---|-------|--------|--------|
| Design Capacity (Tbps) | 90 | 350 | 2,000 |
| Networks | 40 | 190 | 240 |
| Internet Exchanges | 0 | 6 | 6 |
| Cloud and Content Network & Caching Nodes | 0 | 15 | 30 |
| Cloud and Content Platforms | 0 | 2 | 10 |
| Cross Connects | 1,300 | 10,000 | 15,000 |

The recipe to success



- Marseille started as a cable landing point for subsea cables from Asia, M.East and N.Africa towards Paris and other key central European internet hubs, with dense telecoms, internet, CDN and cloud infrastructure.
- Terrestrial infrastructure evolved around Marseille to match the ample capacity of subsea cables and provide transit toward Paris and West/Central Europe.
- The evolution of infrastructure attracted ISPs and IXPs;
- This created the substrate for deploying CDNs and clouds to serve N. Africa and M. East from European soil.
- The evolution of the ecosystem and the economies of scale drove more investments in the area.
- Eventually Marseille grew to one of the largest hubs in the world for internet, content and cloud.
- **Marseille and Paris acted complementary, helping each other grow**
- **The existence of a neutral data center (Interxion) was a key factor of this success**

International Internet Bandwidth
Global ranking, 2024

Source: Telegeography

Paris
#8

Marseille
#10

Greece: Announced Subsea Cables*, 2023-2027

| Name | Scope | GR Landing |
|----------------------------|------------------|---------------------|
| IONIAN | Regional | Preveza |
| THETIS | Local | East Crete, Athens |
| 2AFRICA | Intercontinental | Heraklion |
| India Europe eXpress (IEX) | Intercontinental | Heraklion |
| BLUERAMAN | Intercontinental | Chania |
| Apollo East & West | Local | Heraklion, Athens |
| Andromeda | Regional | Heraklion |
| MEDUSA | Mediterranean | Heraklion |
| SeaMeWe6 | Intercontinental | GR Under Evaluation |
| TEAS | Intercontinental | TBC |
| GR-Egypt Interconnector | Regional | Crete |
| EMC | Intercontinental | TBC |
| GreenMed | Regional | Chania |

Replicating the Success Story to Heraklion

Is Heraklion-Athens similar to Marseille-Paris?

Heraklion

- Multiple subsea cables
- Transit subsea infrastructure towards Athens
- An excellent geographic advantage – proximity to N. Africa & Middle East
- A trusted, neutral global datacenter operator



Athens

- Terrestrial infrastructure, global carriers & Tier-1s, IXPs
- Upcoming cloud regions/zones by the top 3 hyperscalers
- Infrastructure towards Athens
- The same trusted, neutral global datacenter operator ☺



+



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DLR's vision for Greece

#1 Become the gateway for East Europe to Asia, Africa and middle east; act as a backup gateway for Central and West Europe

Significant interest from intercontinental submarine systems for Crete; Significant developments in the terrestrial wholesale connectivity. DLR investments in Athens and Crete act as a catalyst, connect the dots and accelerate developments.

#2 Grow to a regional data hub.

Huge announced investments in Greece, amongst which from Microsoft, Google and Amazon, will allow Greece not only to serve its own traffic but also to become a data hub for the greater region. Oracle seems the next to follow.



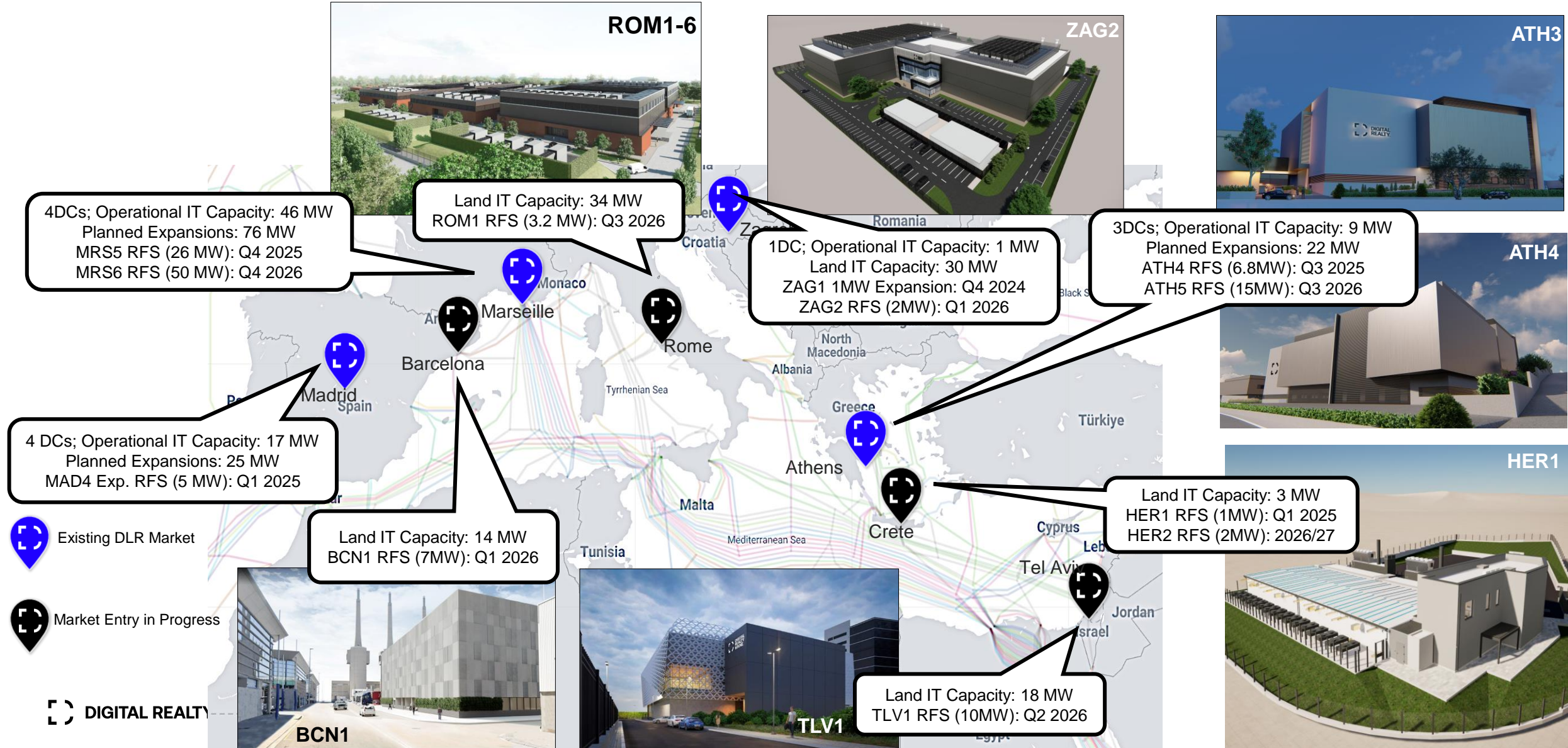


Digital Realty's plans

Med, Greece & Crete



Digital Realty's New Mediterranean Markets



Conclusions

- Significant subsea investments in Mediterranean; reshaping the telecommunications map. MRS-Egypt highway evolves to a Med Hub.
- Heraklion becomes an important subsea cable landing point. In cooperation with Athens, it can act not only as a transit gateway, but we also expect it to evolve to a regional data & content hub.
- Digital Realty, as a neutral data center provider, acts as a catalyst that accelerates developments in the area.
- Our Med strategy includes heavy investments and a consistent, holistic approach across the markets that comprise the “Mediterranean hub”.





Questions?



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Thank you!

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