

*ONLY 4% OF MEDITERRANEAN BERTHS
HAVE SHORE POWER.
YOUR BIGGEST CUSTOMERS ARE ORDERING
METHANE & METHONAL SHIPS.
YOU HAVE 1,335 DAYS UNTIL THE LEGAL
DEADLINE.*

Green Port infrastructure: From Perceived Risk to Bankable Asset

Eduard de Visser, Executive Director MTBS



EXECUTIVE SUMMARY: CREATING NEW “LIGHTHOUSES FOR THE MEDITERRANEAN”

Regulatory deadlines are active, fleets are greening, and capital is available — What is missing is the structure. That is what MTBS delivers — and we have proven it three times in this region

REGULATORY DEADLINE

- FuelEU verification cycle: GHG balance deadline 30 April 2026 for all all ships >5,000 GT
- AFIR 2030 OPS mandate: legal obligation for all TEN-T core ports
- EU ETS shipping: 100% allowances from 2027; penalties now live

FLEET TRANSITION

- 1,126 dual-fuel vessels delivered or on order globally
- 74% of container/vehicle carrier orderbook is dual-fuel capable
- LNG leads at 56% of container dual-fuel orderbook gross tonnage

INVESTMENT FRAMEWORK

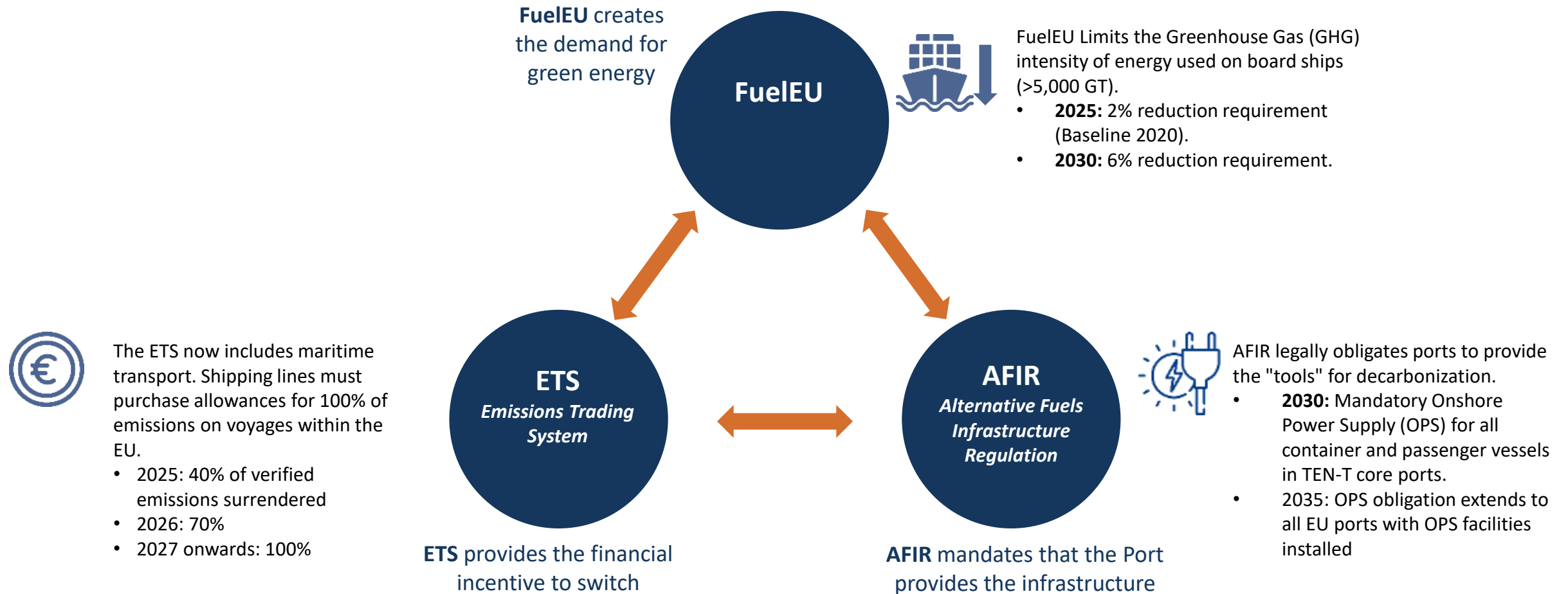
- MTBS analysis shows that \$55–83B investment need for developing-country ports alone. What does this mean for Med Ports?
- Blended Finance (EU grants + private equity) is the only viable model
- AFIF: €600M deployed to 24 EU ports for OPS and green infrastructure



THE REGULATORY CLOCK IS TICKING

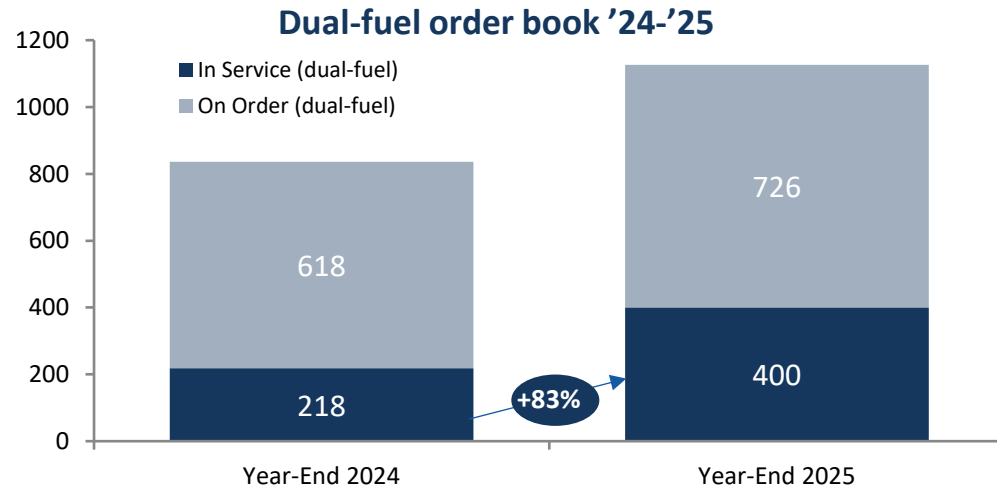
Three Regulations. One Deadline.

Your Customers Are Already Responding. Your Port Must Now Choose.

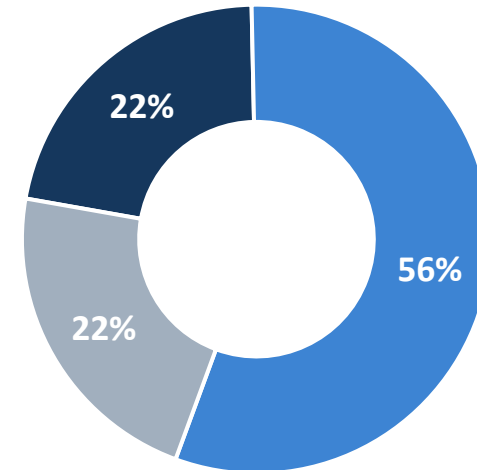


THE FLEET IS GREENING FASTER THAN THE PORTS

\$150 billion committed by liner operators. The vessels are being built. The infrastructure to serve them is lagging behind



Containership order by fuel type, Dec. '25



LNG dominates today (56% of dual-fuel orderbook (in mln. TEU), but methanol is the second-fastest growing category and the fuel choice of Maersk. Ports serving the Mediterranean need infrastructure for both

■ Conventional fuel ■ Methane ■ Methanol

Most carriers focus on FuelEU compliance, through Dual-Fuel shipping:

- **Maersk** (Gemini): Methanol leader. 15+ dual-fuel methanol vessels in service, 80+ in the pipeline; net-zero target 2040
- **CMA CGM** (Ocean Alliance): 70 methane & methanol-ready ships in service. 70 alternative-fuel ships by 2028 Net-Zero by 2050
- **Hapag-Lloyd** (Gemini): 14 methanol dual-fuel newbuilds on firm order; 37 LNG dual-fuel vessels already in fleet; targets ~one-third absolute emission cut by 2030; net-zero 2045
- **MSC**: 52+ methane dual fuel ships delivered + 103 on order
- **Evergreen** (Ocean Alliance): 60 LNG dual-fuel vessels on order; carbon neutral by 2050



Adrian Maersk



CMA CGM Antigone

Source: MTBS Analysis; [Dual-Fuel Fleet Dashboard](#) — [World Shipping Council](#)

NORTHERN EUROPEAN PORTS ARE DEPLOYING OPS. MEDITERRANEAN PORTS ARE STILL PLANNING. THE AFIR DEADLINE DOES NOT WAIT.

2030
Northern EU
OPS Readiness
35-50%

Status 2025:
55-70+ berths
~7-10% of 820
major berths



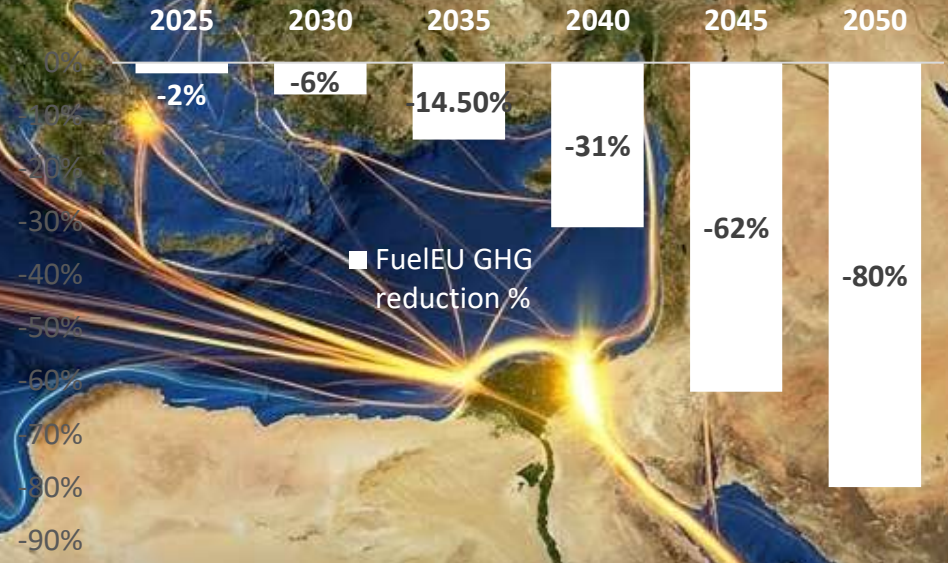
FuelEU
Infrastructure Gap

2030
Med EU
OPS Readiness
15-20%

Status 2025:
15-20+ berths
~4-5% of 350
major berths



FuelEU Maritime: Effective January 1, 2025
First Compliance deadline: January 1, 2030



Source: European Commission, Regulation (EU) 2023/1805 (FuelEU Maritime); Transport & Environment "Status for onshore power supply in selected EU ports" (2025), MTBS analysis

WE HAVE DONE THIS. HERE. IN THIS REGION.

Three Mediterranean and Southern European port authorities. Three green infrastructure challenges. Three delivered solutions.



Client: APRAM (Administração dos Portos da Região Autónoma da Madeira) 2023–2024

Island multi-port system. Severe grid constraints. Tourism-driven air quality pressure. Zero expansion room.

What we delivered: Traffic forecast per port + full financial feasibility of OPS deployment + strategic analysis of multiple OPS system designs including grid architecture and BESS options.

Why it matters for you: The constraints Madeira faced — limited grid, urban adjacency, constrained budgets — are the same constraints every Mediterranean port in this room is navigating.



Client: Valencia Port Authority (APV) 2022–2023

Spain's largest Mediterranean container port. TEN-T core network. Direct AFIR exposure.

What we delivered: Full strategic plan embedded with sustainability, OPS, and energy transition positioning. 50+ stakeholder institutions engaged. Action plan with implementation timelines and budgets.

Why it matters for you: Valenciaport's green strategy is now its competitive advantage on the Med's busiest container corridor.



Client: North Adriatic Sea Port Authority 2024
TEN-T core port. Urban-integrated. Cruise + container dual pressure. Zero greenfield expansion.

What we delivered: Economic analysis + traffic forecasts for all key commodities + strategic masterplan for the ports of Venice and Chioggia.

Why it matters for you: The Adriatic's most constrained port system — and we designed its future.

Maritime Transport & Business Advisory | Strategy · Finance · Transactions · PPP Structuring

Over 800+ port projects worldwide (incl. 40+ Transaction Advisory)

THE INVESTMENT CHALLENGE IS REAL — AND DIFFERENTLY FINANCED FOR YOU

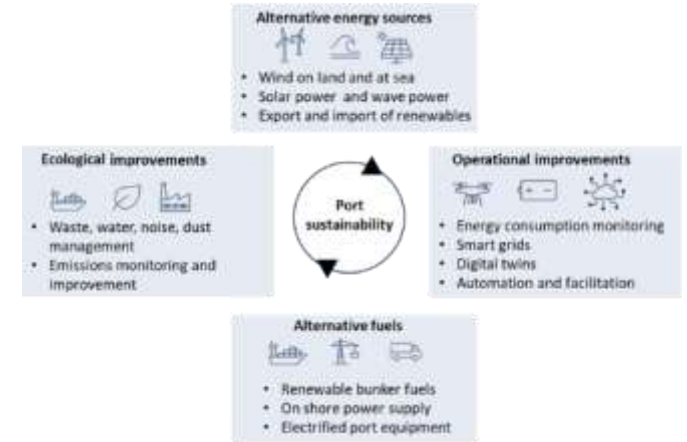
Our IAPH study on decarbonization in developing Ports demonstrated an investment need of US\$ 55 – US\$83 billion for developing countries. What does this signal for Mediterranean Ports?

MTBS Case Study: Study on Investment Requirements of Developing Countries for Port Decarbonisation and Adaptation to Climate Change

In 2024, MTBS was commissioned by IAPH to quantify the green infrastructure investment needs of the world's most financially constrained ports — 126 ports across 51 nations.

Key findings:

- Port decarbonisation requires major investment, estimated at \$55–83 billion globally (about \$430–650 million per port), with costs varying by port characteristics such as size, location, and existing infrastructure.
- Smaller ports are more vulnerable due to:
 - Limited government funding
 - Lower revenue from port operations
 - Weaker existing infrastructure
 - Smaller management capacity and expertise
- Overall, financing port infrastructure is already difficult, as most projects need both strong economic benefits for the region and a viable business case to attract investment.

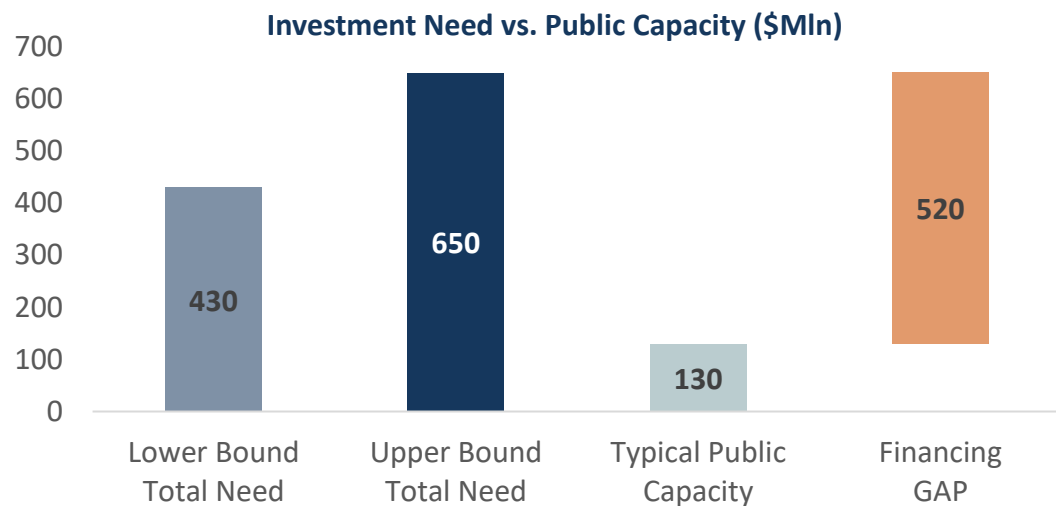


What does this mean for the Mediterranean ports?

If the world's least-capitalised ports face this quantum, the structural investment challenge for the Mediterranean's TEN-T core ports — which must comply with a legally binding AFIR OPS mandate by 2030, with access to EU grant instruments but also facing higher European labour and engineering costs — is no less real. It is simply differently financed.

BRIDGING THE INVESTMENT GAP

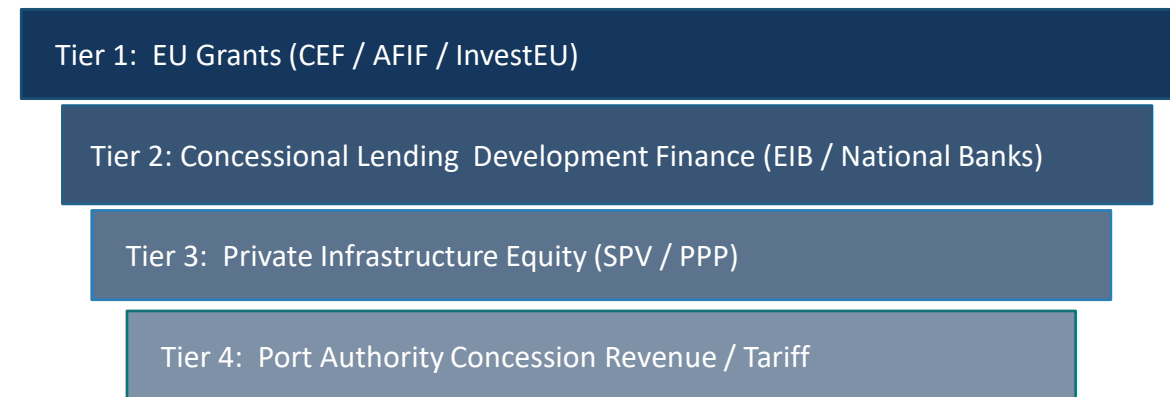
Traditional port revenues cannot bridge the green infrastructure financing gap — structured blended finance is the only viable model



Assuming a 20% Port Authority equity contribution, substantial additional funding is required

- Port authority balance sheets built on concession revenues and public budgets
- Landlord model designed for cargo handling — not energy infrastructure
- The "green premium" cannot be absorbed at AFIR speed from concession revenues alone
- SPVs ring-fence energy infrastructure risk from the core port balance sheet
- Allows institutional investors (pension funds, infrastructure funds) to take equity positions

The Blended Finance Stack



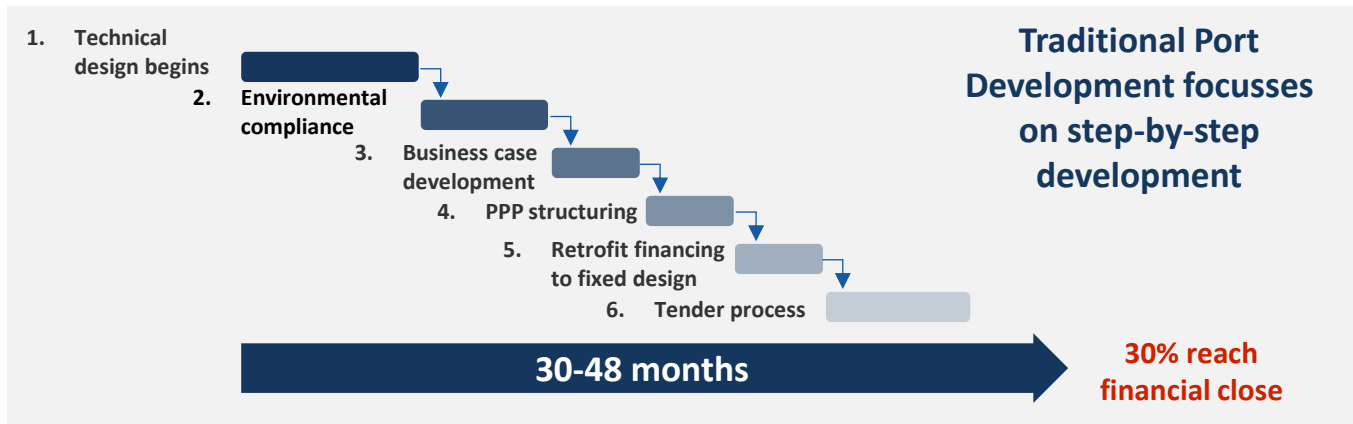
MEDITERRANEAN TEN-T PORTS (20 ports, 2021-2030):

- Accessible: €5-10.5 billion
- Current capture rate: €300-800M (15-25%)
- Optimized capture rate: €2.5-7.4B (50-70%)
- Per port average: €250-525M over 10 years

WHY 70% OF GREEN PORT PROJECTS NEVER CLOSE

The gap between green ambition and financial close is not a technical problem. It is a structuring problem.

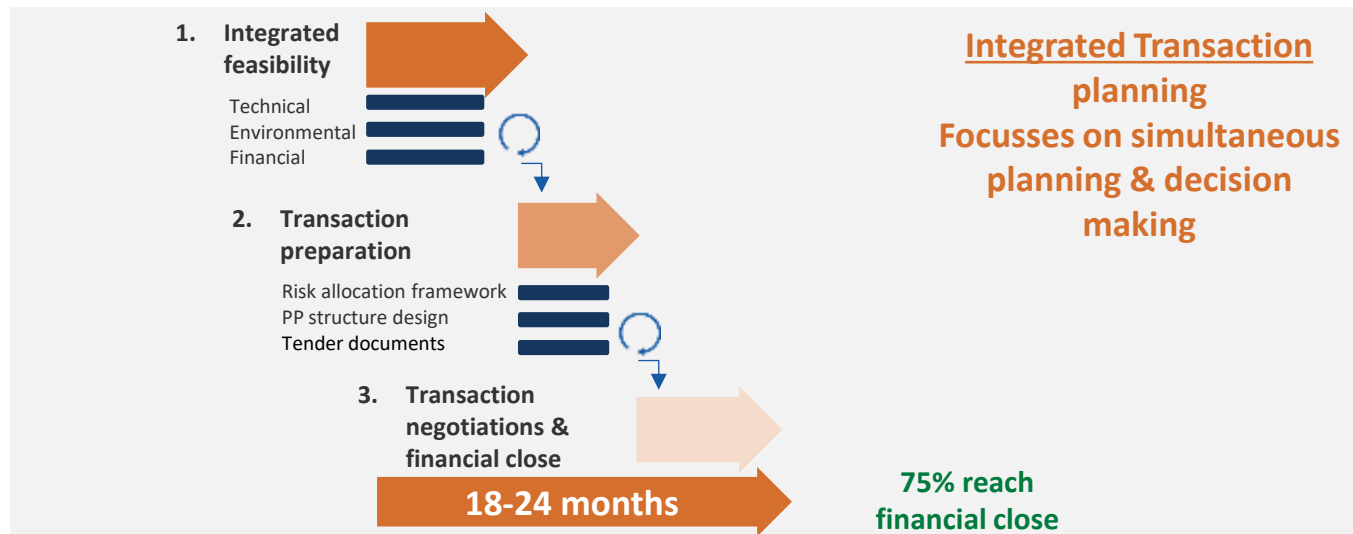
Green Infrastructure planning and development



Most port authorities follow a **sequential approach** to project development—handling environmental, technical, and business planning step-by-step before seeking financing.

This takes about 18 months, and by then, project designs are fixed, making financing difficult.

As a result, 70% of projects fail at the financing stage.



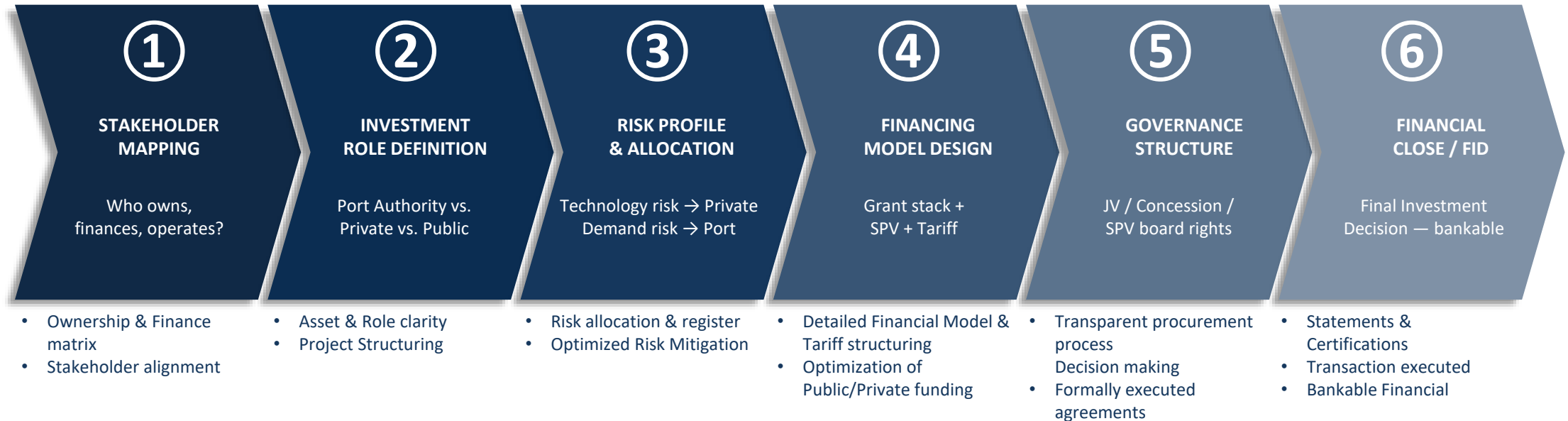
In contrast, successful projects run key **processes in parallel**—feasibility, demand agreements, and financing structure.

This enables faster progress (tendering by 6 months, negotiations by 9 months) and leads to much higher success rates, with 75% reaching financial close.

The key takeaway: integrated, parallel development—not luck—drives success in port financing.

ENGINEERING BANKABLE PORT INFRASTRUCTURE

MTBS offers a best practice approach to bankability



The Problem This Solves

- **Engineering a Path to Bankability:** Standardizes unstructured green projects into certified, bankable assets, shifting project success rates from a 30% industry average to a 75%+ engineered outcome.
- **Operationalizing the Green Premium:** Monetizes sustainability by mapping stakeholder alignment and public/private roles to unlock lower-cost blended finance, green bonds, and critical EU decarbonization subsidies.
- **Integrated Strategic De-Risking:** Parallel-tracks technical and financial structuring to optimize risk allocation early, preventing costly legal delays and ensuring infrastructure is operational before 2030 regulatory deadlines.
- **Competitive Regulatory Positioning:** Converts FuelEU and AFIR mandates into revenue streams, transforming the port from a service provider into a strategic hub that avoids penalties and attracts shippers.
- **Evidence-Based Decision Clarity:** Provides Port Authorities with transparent, stage-gates, replacing "hope-based" planning with a disciplined transaction architecture that ensures every investment is defensible and execution-ready.

That gap — between green ambition and financial close — is precisely where MTBS operates

The Mediterranean doesn't have a green infrastructure shortage. It has a structured deal flow shortage

Do you have a green infrastructure project that has not yet reached financial close?

THANK YOU



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