MIT CONSULT

COMPANY OVERVIEW

PIANC
The World Association For Waterborne Transport Infrastructure

Engineering and Consulting for Marine Ports and Terminals

We provide a wide range of engineering and consulting services in the field of marine and river port facilities and terminals to port operators, owners, investors, banks, government organizations.

We invest our attention, time, skills and advanced knowledge in relationships with our Clients, helping them to achieve the best results in implementation of port projects.

Our Domain Expertise

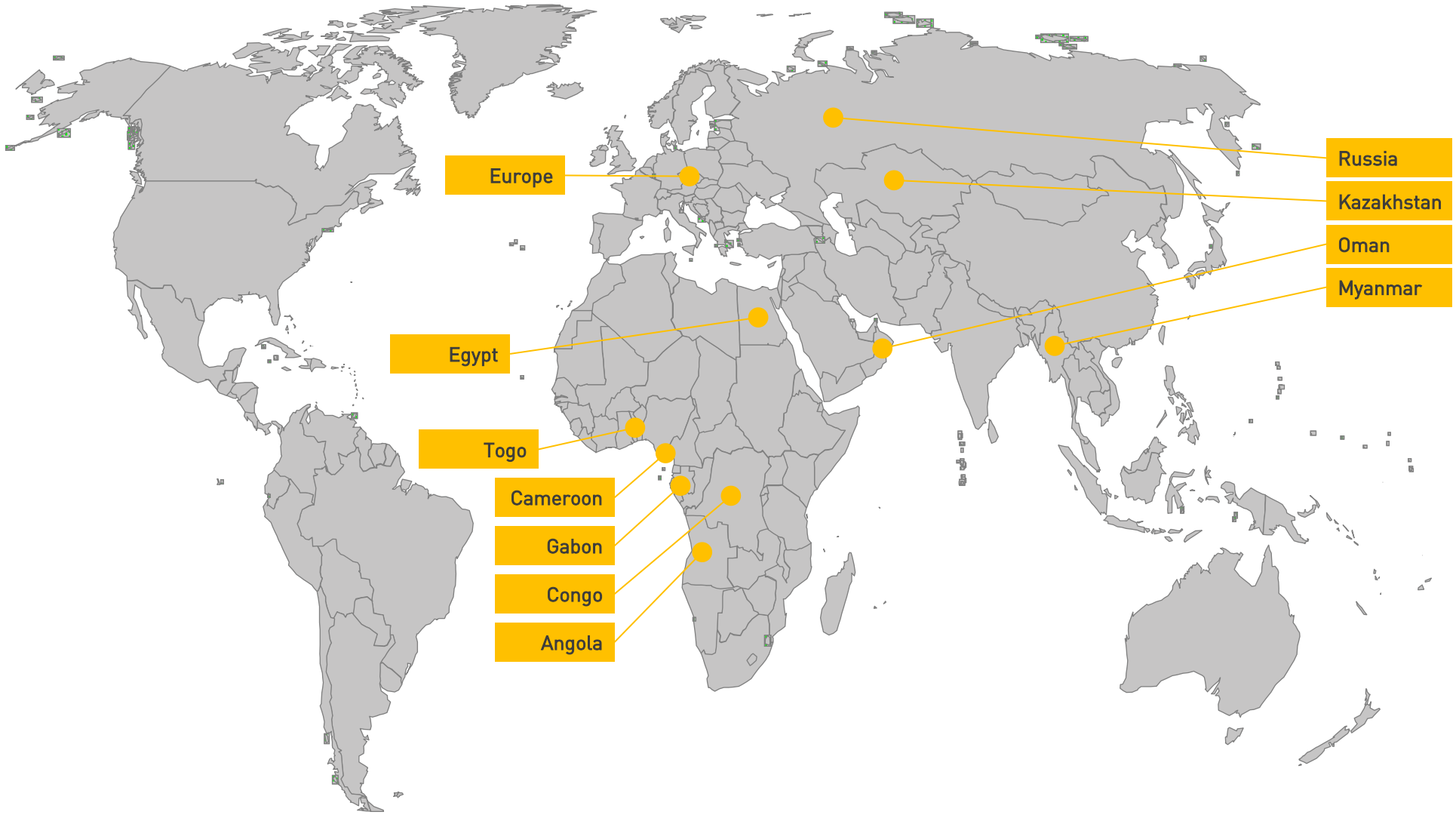
- Container Terminals
- Bulk and General Cargo Terminals
- Liquid Cargo Terminals (including Food-Grade Liquid Cargo Terminals)
- Liquefied Natural Gas (LNG) Terminals
- Ro-Ro Terminals and Ferry Terminals
- Grain Elevators, Mills, and Marine & River Grain Terminals
- Dry Ports
- Port and Terminals Structures, Coastal and Beach Infrastructure
- Simulation Modeling

OUR EXPERTISE AND EXPERIENCE SPAN BOTH GREENFIELD AND BROWNFIELD PROJECTS

Areas of Our Consulting Services

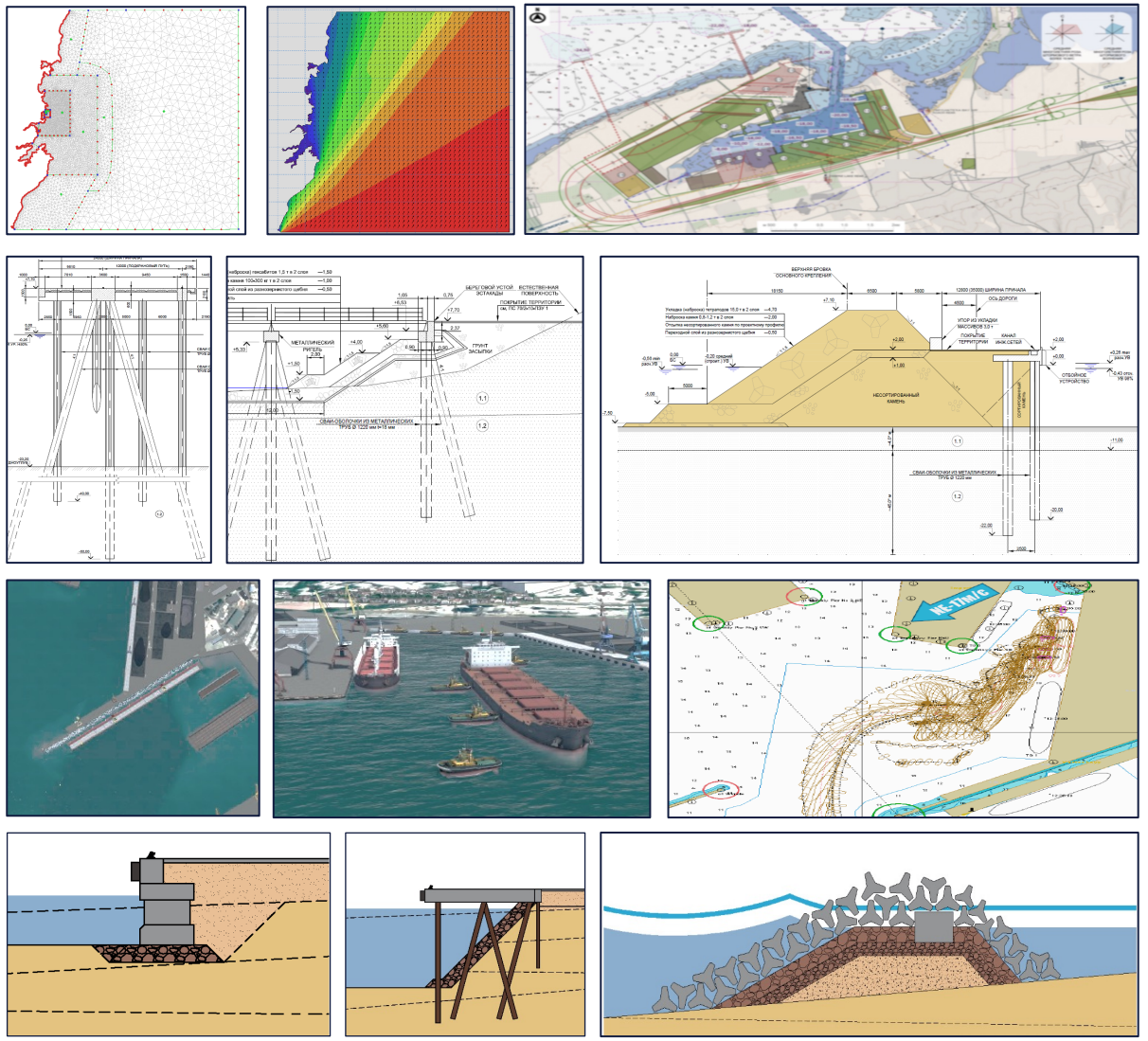
1. Fit-for-purpose consulting, engineering and design:
   - early stage engineering: studies, including feasibility, concept developing and advisory, technology and site selection, pre-FEED, preliminary budget and schedule estimates, development of project's financial model and implementation scheme (including concession-based), permitting and compliance
   - Front end Engineering Design (FEED)
   - Detailed Design
   - Owner's engineering and consulting, including home office support to construction
2. Technical due diligence and integrity assessment of assets, infrastructure and process handling equipment
3. M&A and Advisory support for investment decisions, including the search for M&A targets internationally
4. Facilitating the structuring and development of early-stage projects to mobilize large-scale banking, private and institutional capital

MIT CONSULT SPECIALISTS HAVE PARTICIPATED IN THE LARGEST MARITIME PORT PROJECTS IN RUSSIA AT TERMINALS HANDLING ALL TYPES OF CARGO, AS WELL AS PROJECTS IN EUROPE, CENTRAL ASIA, THE MIDDLE EAST, AFRICA AND SOUTHEAST ASIA



PORT AND TERMINALS STRUCTURES, DEVELOPMENT OF COASTAL AND BEACH INFRASTRUCTURE

ILLUSTRATION



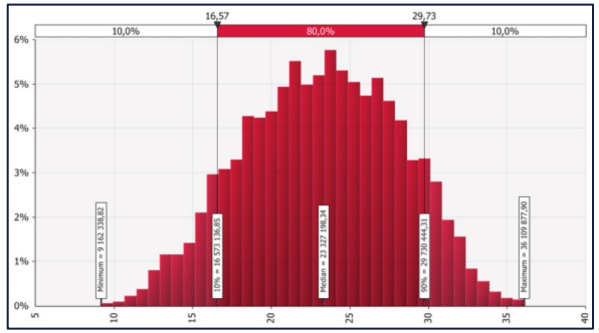
BRIEF DESCRIPTION

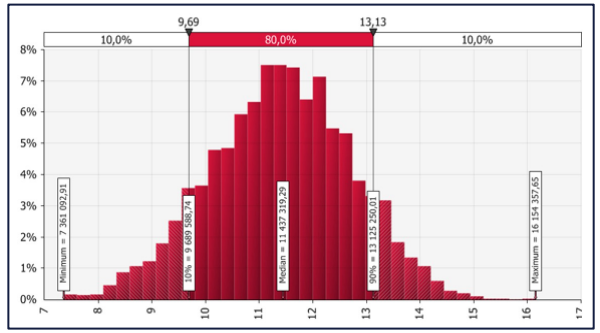
Our team specializes in the integrated design and analysis of maritime infrastructure, with core expertise in :

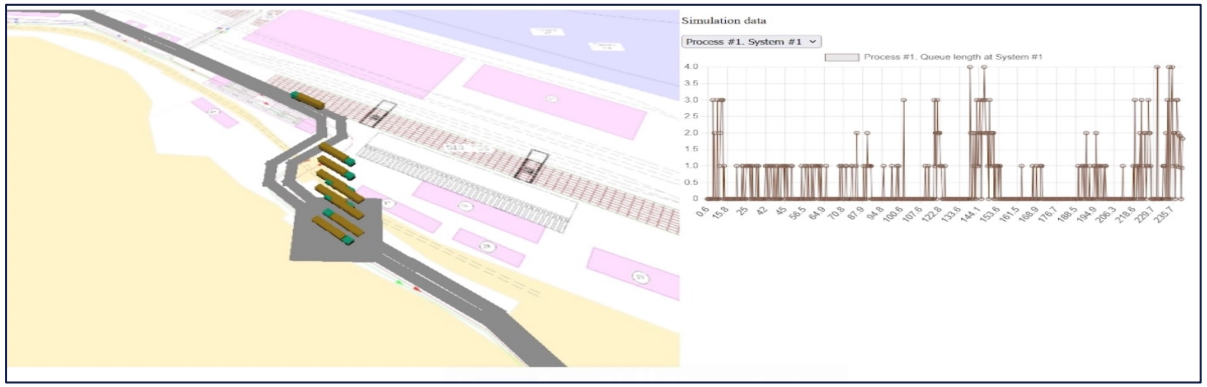
- Advanced Wave Simulation & Modelling: Utilizing state-of-the-art numerical models (e.g., SWAN, MIKE) to simulate wave climate, transformation, and hydrodynamic loads for both offshore and port basins
- Bridge simulations: ship movements and navigation utilizing simulation system TRANSAS NTPro5000, Virtual Shipyard ship modeling and navigation area modeling .
- Design of Wave Protection & Coastal Defense Infrastructure: Engineering robust solutions including breakwaters, seawalls, revetments, and beach nourishment schemes based on modelled environmental conditions.
- Quay & Berthing Structure Design: Designing durable quay walls, wharves, jetties, and mooring dolphins, integrating geotechnical and marine considerations.
- Waterways infrastructure planning: approach channels, navigation aids, anchorages, vessels traffic management systems, GMDS infrastructure.
- Finite-Element Analysis for Structural Integrity: Performing detailed FEA on critical components (sheet piles, concrete caissons, pile caps, fenders) to assess stress, deformation, fatigue, and ultimate limit states under complex loads;

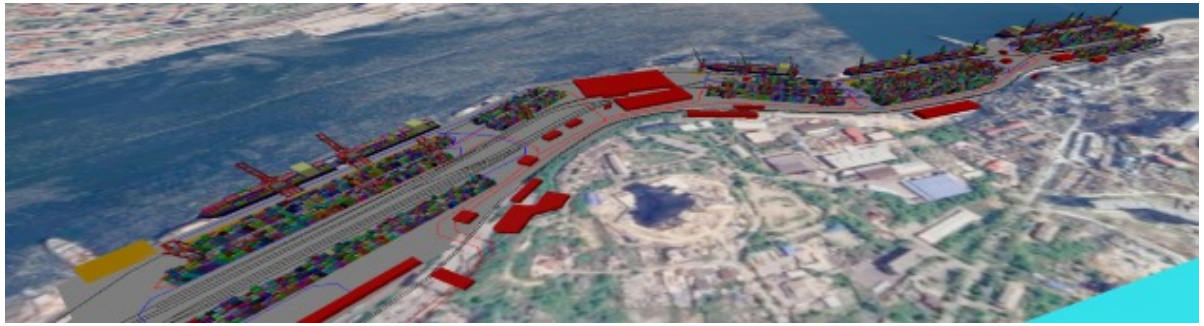
APPLICATION OF SIMULATION-BASED MODELING TO ADDRESS COMPLEX CHALLENGES

ILLUSTRATION









BRIEF DESCRIPTION

Our company leverages a proprietary knowledge base and advanced simulation modeling to solve complex logistical and operational challenges. We apply state-of-the-art computer science methods—including Monte Carlo method, discrete-event simulation, agent-based modeling—to analyze, design, and optimize critical infrastructure and processes. Our Core Analytical & Optimization Expertise Includes:

- Port & Terminal Throughput Analysis: Determining maximum capacity and identifying bottlenecks across entire seaport operations.
- Intermodal Coordination: Optimizing the integration and scheduling of rail, road (auto), and maritime transport for seamless cargo flow.
- Maritime Access & Vessel Turnaround: Modeling ship traffic in approach channels and port basins to minimize waiting times and maximize berth productivity.
- Storage Yard & Warehouse Optimization: Analyzing and planning storage capacity and stacking strategies to improve space utilization and retrieval times.
- Internal Transport Logistics: Simulating and optimizing the movement of terminal trucks (AGVs, shunt trucks, etc.) and cargo within the terminal.
- Equipment Utilization & Fleet Management: Modeling the performance of cranes, conveyors, and other cargo handling equipment to right-size fleets and reduce idle time

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