Sustainable

Dredging Project
Design & Execution

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Overview

- Strategic Planning
- Dredging Project Design
- Dredging Project Execution
- Operations & Maintenance

Port Management System
Strategic Planning

- Identifies:
  - Broad Port Goals
  - Key Market Opportunities
  - Port Development Objectives
  - Environmental Policy and Objectives
Strategic Planning (Concept Design) → Scoping → Dredging (& Dredged Material Disposal) → Project Design → Approval → Dredging Project Execution

Return on Investment Analysis → Partners

Environmental Analysis → Mitigation Planning

Expert Review
Dredging Project Design

- Specify Design Vessel
- Commercial Requirements
- Physical/Environmental Data
- Existing Traffic Analysis

  ▼ Channel Alignment, Widths, Depths

  ▼ Maritime Risk (Safety) Analysis
Dredging Project Design

- Design for Reduced Shoaling
  - Keep Sediment Out
  - Keep Sediment Moving

- Key Design Tools
  - Hydrodynamic and Sedimentation Models
  - Ship Handling Simulations
  - Traffic Planning
Strategic Planning (Concept Design)

Scoping

Dredging (& Dredged Material Disposal)

Project Design

Environmental Analysis

Mitigation Planning

Partners

Approval

Expert Review

Dredging Project Execution
Dredging Project Execution

- Project Management Plan
- Monitoring Plan
- Communication
  - Project Team
  - Public
- Evaluation
  - Project Goals
  - Environmental Effects
References

- *Minimizing Harbor Sedimentation*, PIANC WG 43; January 2005 (draft)
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