

Sustainable

^ Dredging Project
Design & Execution

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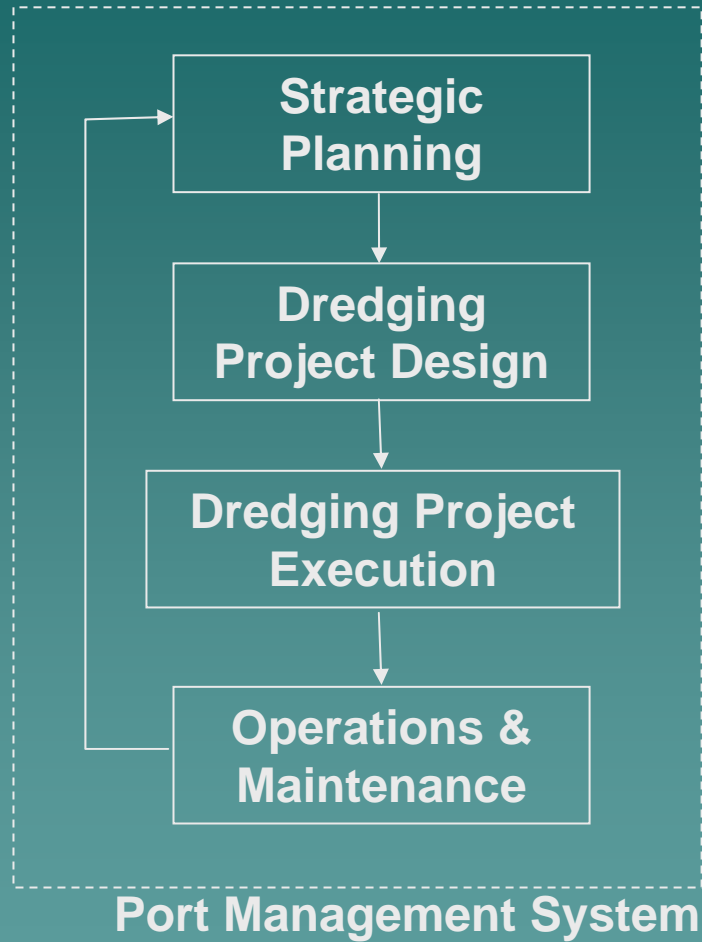
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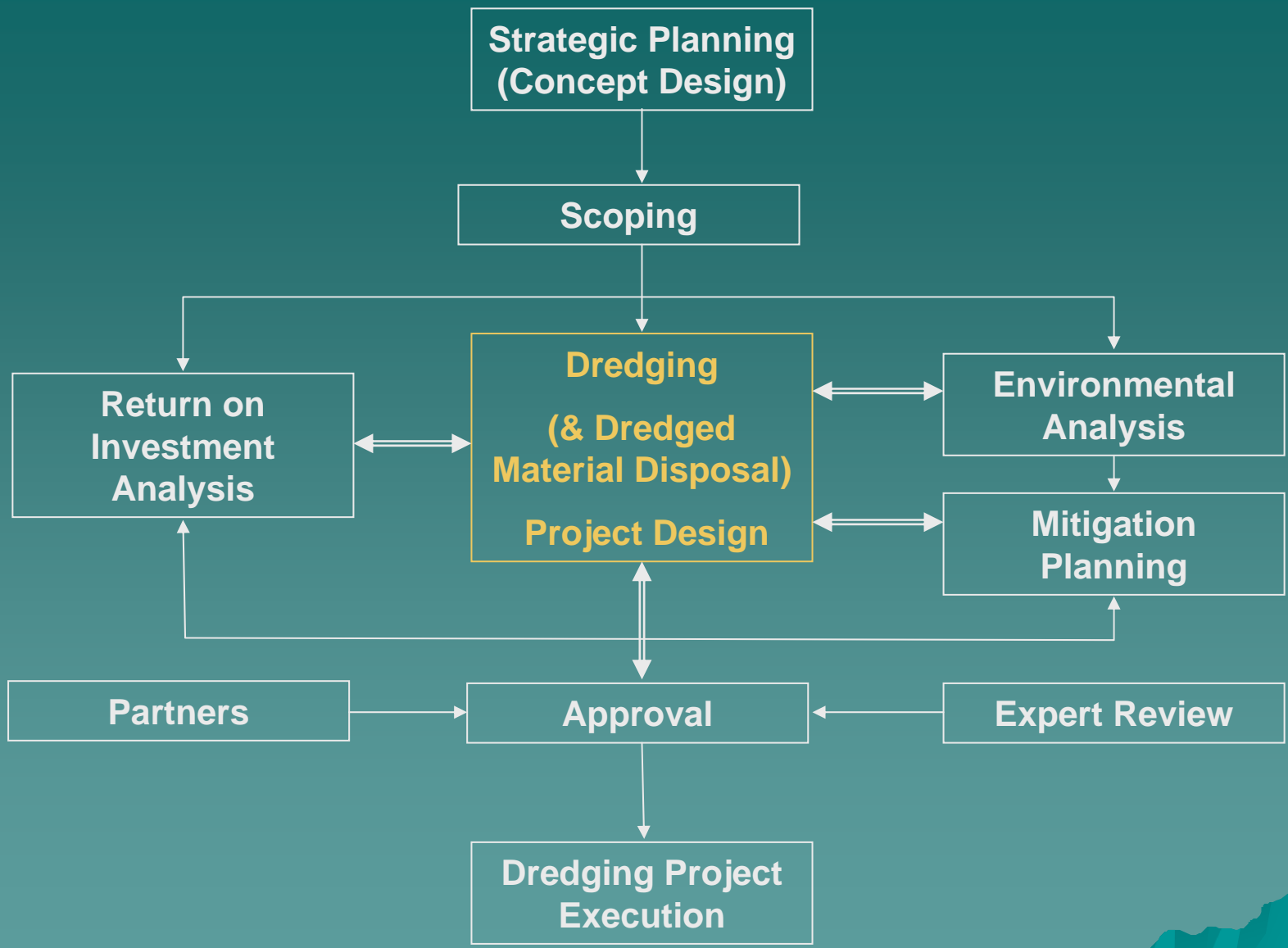


Overview



Strategic Planning

- ◆ Identifies:
 - Broad Port Goals
 - Key Market Opportunities
 - Port Development Objectives
 - Environmental Policy and Objectives



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



Dredging Project Execution

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

References

- ◆ *Approach Channels – A Guide for Design*, PIANC PTC II-30; June 1997
- ◆ *Minimizing Harbor Sedimentation*, PIANC WG 43; January 2005 (draft)
- ◆ *Guidelines for Sustainable Inland Waterways and Navigation*, PIANC EnviCom Rpt of WG 6; 2003
- ◆ *Ecological and Engineering Guidelines for Wetlands Restoration in Relation to the Development, Operation and Maintenance of Navigation Infrastructures*, PIANC EnviCom Rpt of WG 7; 2003



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