

Facilities Engineering Seminar: Master Planning

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Port Master Planning Considerations Overview

- > Need to understand dynamic, global market conditions (flexibility and programmatic planning)
- > Need to optimize existing operating assets and facilities
- > Need to be sustainable (including climate change) and have energy resiliency
- > Need to be proactive with both internal and external stakeholders
- > Need to develop “cost effective” improvement programs that best meet existing tenant/client needs and future market opportunities

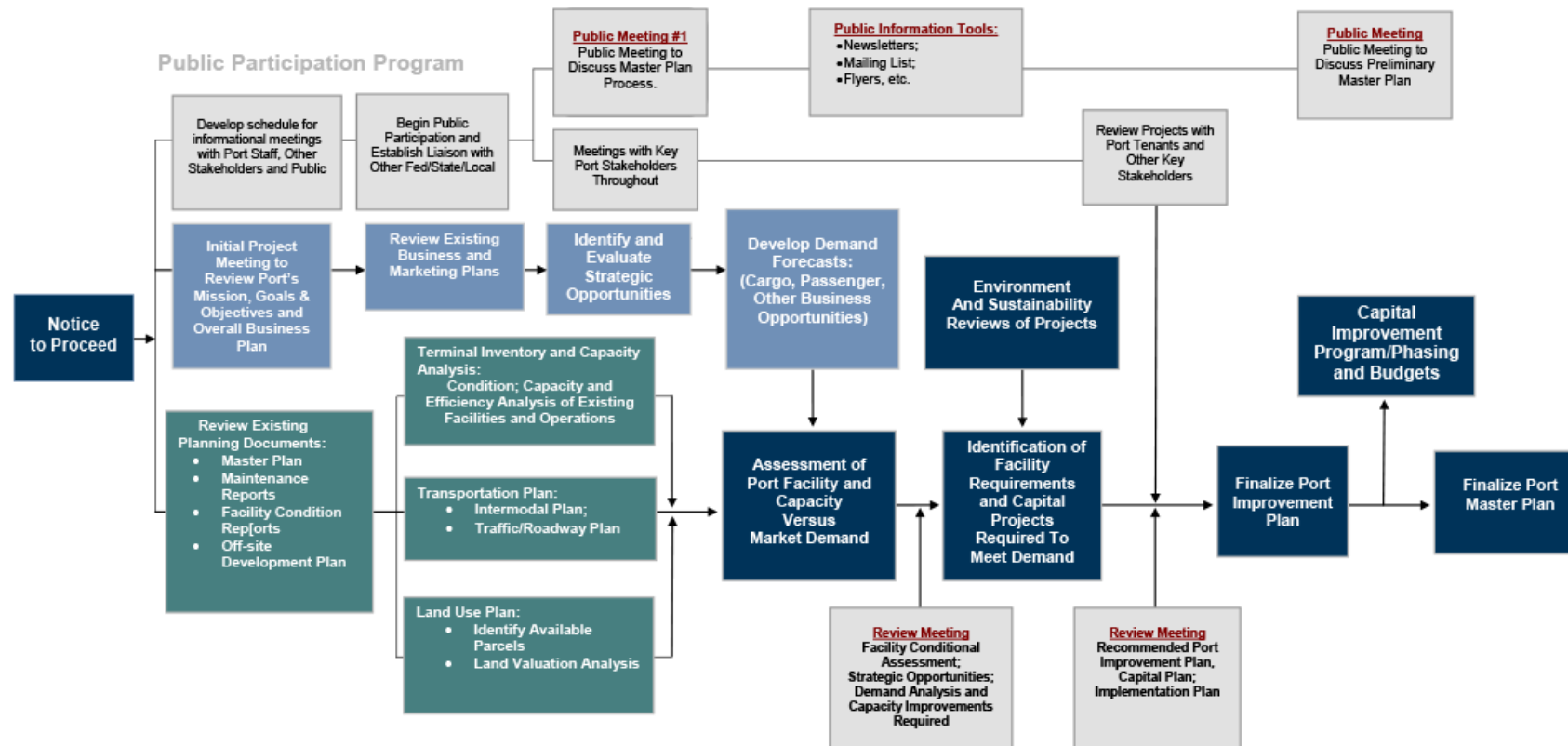


Master Planning is an Important Step

- > Port master planning allows a port to be proactive in identifying and solving future issues and problems by:
 - Optimizing existing facilities and assets
 - Understanding the business needs of both current and future tenants
 - Providing the flexibility to anticipate and react to new market opportunities
 - Keeping both internal and external stakeholders informed through good communication and out reach programs
 - Identifying future facility and operational requirements before they become critical and a bottleneck to growth
 - Coordinating future needs/plans with other local and regional entities to ensure support and avoid conflicts

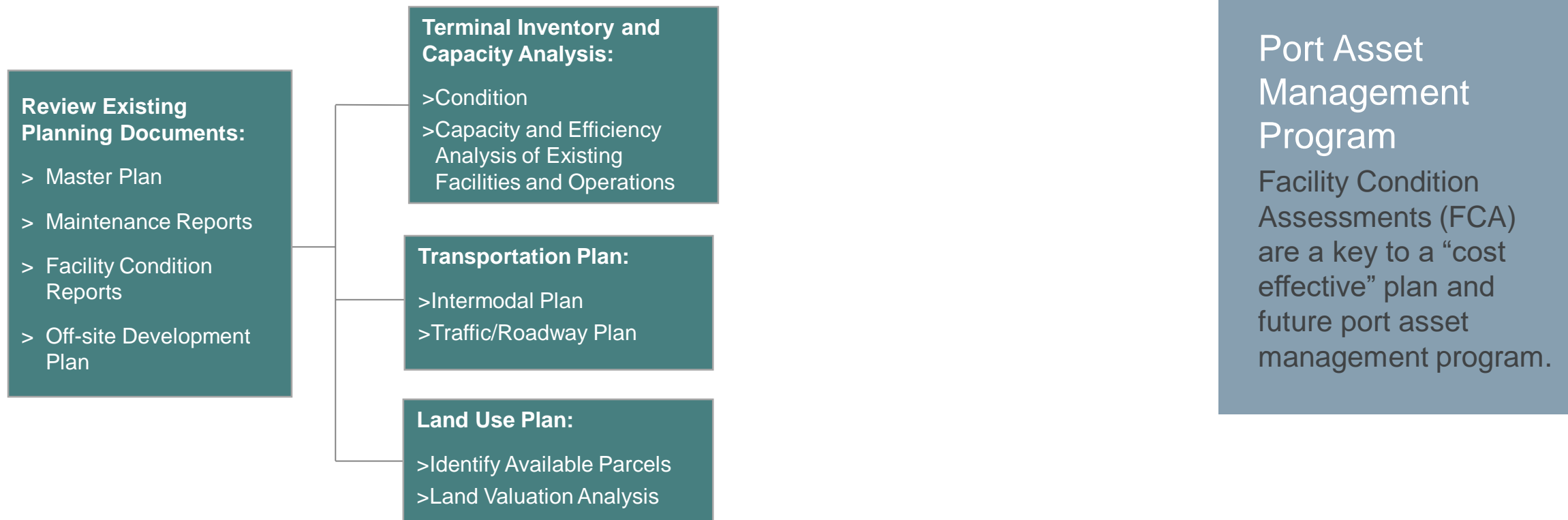


Master Planning – Typical Process



Phase I: Facility Assessment
 Phase II: Set Port Strategic Vision and Direction (Market Forecasts)
 Phase III: Develop Master Plan and Capital Investment Strategies
 Public Participation Program

Phase I Review of Existing Documents and Facilities Assessment

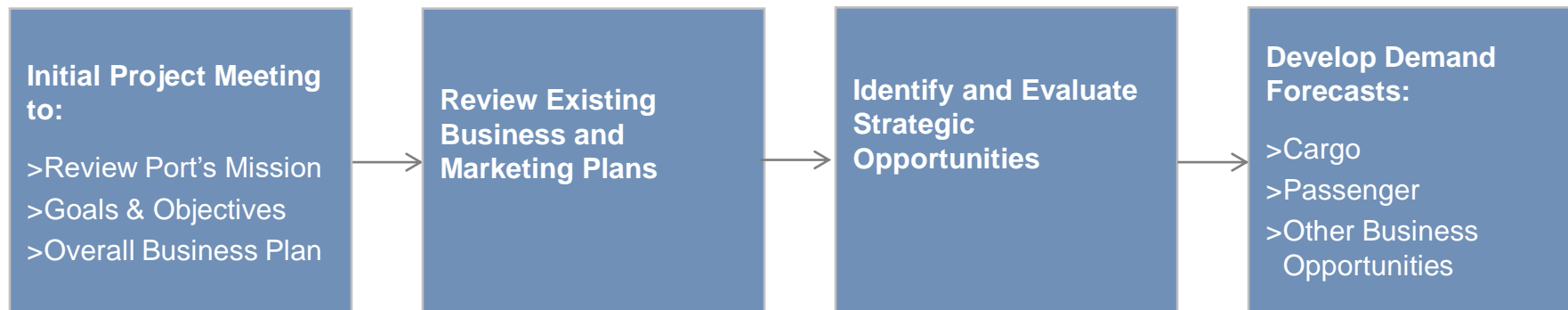


Facility Condition Assessments and Operational Inventory

A critical element of any master plan – making the best use of the port's *existing* assets



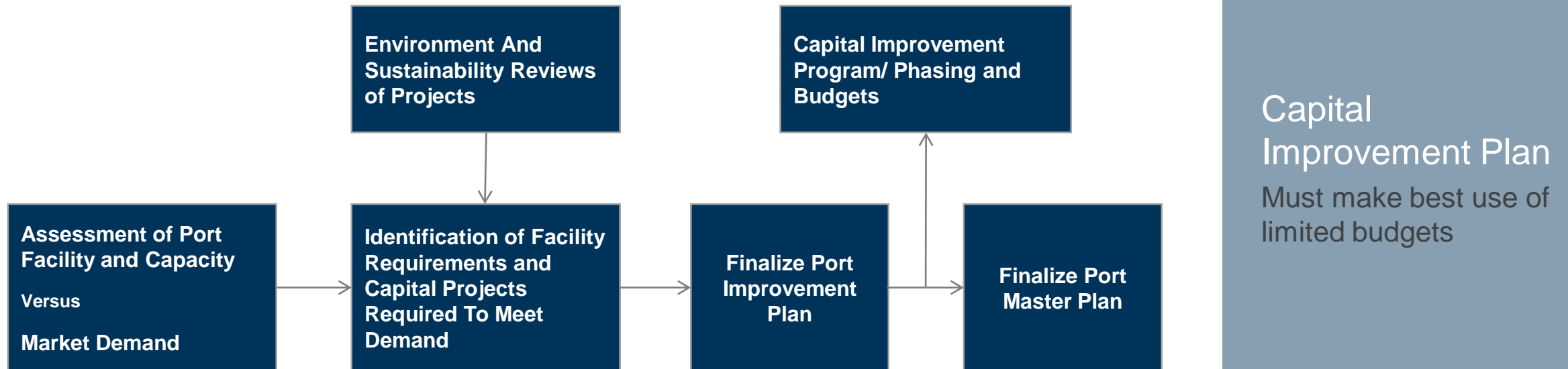
Phase II: Set Port Strategic Vision and Direction (Market Forecasts)



Master Plan

Needs to set a vision and direction rather than just react to short-term opportunities

Phase III Develop Master Plan and Capital Investment Strategies



Current/Recent Port Master Plan Projects – Understand What You Have

- > Port Authority of New York and New Jersey
 - Will include a demand and capacity analysis, working to define an AM Program
- > Port of Philadelphia
 - Finished a Strategic Plan, starting a condition assessment and master/capital plan
- > Port Canaveral
 - Combining several on-going tasks into one Master Plan
- > Port of New Orleans
 - Update of the Master Plan
- Port Freeport
 - Included an FCA as element to the recently completed Master Plan
- > Port of Tacoma
 - Developed “State of Art” Asset Management Program
- > Port of San Diego
 - Completed visioning, framework review and extensive public outreach, on-going Asset Management Program and will include environmental analysis and program of future uses
- > Port of Long Beach
 - Will include a land use, extensive public outreach and a master plan update; developing an Asset Management Roadmap
- > Port on Longview
 - Finished an AM Roadmap and starting a strategic vision update
- > Port of Houston
 - Developing an Asset Inventory Program to understand what they have before starting their Strategic/Master Plan update

70 Years of Shaping the Future

- > Founded in 1945
- > A strong reputation throughout our domestic and international operations
- > Engineering News Records Top Firms Lists
 - #44 Top 500 Design Firms
 - #55 Top 200 Environmental Firms
- > A dedicated staff that specializes in port/terminal planning and design:
 - Port and Terminal Master Plans
 - Bulk Terminal Planning and Material Handling Studies and Design
 - Container Terminal Designs
 - Equipment Studies and Specifications
 - Cost Estimating
 - Vessel Maneuvering and Hydrodynamic Modeling
 - Dredged Material Management and Navigational Studies
 - Sustainability and Energy Planning

