Port Financing, Investment and Development Initiatives

October 3, 2017

Blair Garcia
US Director – Maritime Division
Historic Port Infrastructure Funding

TIGER

- During the previous eight rounds, USDOT received more than 7,500 applications requesting more than $152 billion for transportation projects.
Historic Port Infrastructure Funding

FY 2016 FASTLANE

- Requested: $9.80 billion
- Awarded: $0.76 billion
- Awarded to Freight Projects: $0.31 billion
Port Planning & Investment Toolkit (PPIT)

- Develop capital plans that clearly identify future needs;
- Determine the most cost-effective, sustainable and efficient solutions to port challenges;
- Position port projects for federal funding such as TIGER, FASTLANE/INFRA and MPO grants; and
- Get port infrastructure projects into MPO and state transportation programs to qualify for other government funding;
- Obtain private sector funding to support their infrastructure projects.

The possible applications of the Toolkit are broad!
PPIT Working Group

• Initial Pool of Volunteers
  • Led by:
    • Jean Godwin – AAPA
    • Lauren Brand – MARAD
    • Stephen Shafer - MARAD
  • 64 Port Staff & Consultant Volunteers

• Table of Contents Working Group
  • 14 Volunteers
  • Multiple areas of expertise

• Planning & Feasibility Modules Working Group
  • 9 Volunteers
  • Primarily engineering/planning, marketing and economic

• Finance Module Working Group
  • 16 Volunteers
  • Primarily finance, legal and accounting experts

AAPA Professional Port Managers (PPM) Blair Garcia, Elizabeth Ogden, Matt Gresham and Chris Bonura developed the User’s Guide and coordinated the working groups.
Project Definition Process

- The Toolkit can be used to lead a port through a logical and thorough step-by-step process to make sound investment decisions.

- The key is that planning, feasibility and finance decisions can be made based on certain thought processes, and adapted to specific and changing circumstances of each port project under consideration.
Planning Module

• Planning Module clearly defines the planning road map required for successful project financing and funding

• Guides users through a common set of planning concepts and methods

• Maintain a highest and best use strategy for port resources with regard to market, community, environment, land-use, economic, and financial considerations
Initiate: Goals & Objectives

- Every project begins with an initiation effort that involves developing a thorough understanding of the port’s needs that led to the project:
  - Data Collection
  - Stakeholder Engagement
  - Project Goals and Objectives
### Initiate: Data Collection

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<thead>
<tr>
<th>Strategic</th>
<th>Infrastructure</th>
<th>Operational</th>
<th>Market</th>
<th>Financial</th>
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<tr>
<td>Port Planning Documents</td>
<td>Site Boundaries and Adjacencies</td>
<td>Vessel Statistics</td>
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<td>Freight Origins-Destinations Surveys and Statistics</td>
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<td>Equipment Inventory</td>
<td>Customer Leases/Contracts</td>
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<td>Regional Economic and Business Data</td>
<td>Inspection/ Condition Assessment Surveys and Reports</td>
<td>Equipment Deployment Patterns and Productivities</td>
<td>Competitor Port Documents</td>
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<td>Transportation Plans and Improvement Program Documents</td>
<td>Waterside Access</td>
<td>Labor Deployment Patterns</td>
<td>Carrier Schedules, Capacity and Fleet Sizes</td>
<td>Macroeconomic Forecasts (Consumer Price Index &amp; Interest Rates)</td>
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<td>State/Local Freight Plans</td>
<td>Environmental Site Assessment Reports</td>
<td>Labor agreements</td>
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<td>Contracting Requirements</td>
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</table>
Initiate: Stakeholder Engagement

Potential Port Project Stakeholders
• Terminal operators and tenants
• Ocean carriers
• Cargo owners
• Stevedore/terminal labor
• Community and neighbors
• Inland transportation providers: truckers and rail lines
• Logistics providers: warehousing suppliers, shippers
• Financial/infrastructure investors
• Local/tribal governments
• Environmental agencies
• Regulators
• Metropolitan planning organizations (MPO)
• Regional planning boards
• State transportation authorities/departments
• Non-governmental organizations
Quantify: Existing Conditions

- Identify and quantify the Port’s needs by comparing its current capabilities to its potential opportunities and requirements of stakeholders and the community
  - Assets
  - Operations
  - External Influences
  - Volumes & Trade Flows
  - Capacity:

**INPUTS**
- Demand Forecast
- Cargo Characteristics
- Dwell / Velocity
- Productivity
- Vessels
- Peaking Patterns
- Site Layout

**CONSTRAINTS**
- Berth/Wharf
- Storage Area
- On-Dock Rail
- Gate
- Major Equipment/IT
- Waterside Access
- Landside Access

**OUTPUTS**
- Cargo units per year
- Passengers per year
- Ship calls per year
- Barge moves per year
- Rail cars per year
- Truck trips per year
- Trucks per peak hour
Quantify: Drivers

- Regulatory Environment
- Market Dynamics
- Competitive Position
- Market Forecast
Quantify: Project Needs and Context

GAP ANALYSIS

Project Needs - Demand and Phase Capacities

- Loss of Revenue
- Lower Return on Investment

Annual Volume (Thousands TEUs)

- Low Case
- Base Case
- High Case
- Capacity

2015 2020 2025 2030 2035 2040 2045

Project Context

Multiple Project Alternatives

Alternatives Assessment and Review
1. Examination
2. Winnowing
3. Extending

Reasonable Project Alternatives

Alternatives Refinement
- Phasing
- Timing
- Details & Costs

Feasibility: Measure Performance
- Impacts
- Risk

Proposed Project Alternatives for Evaluation
Form: Refine Reasonable Alternatives

- Phasing
- Timing
- Details
- Cost

Planning Module
Capacity, Development & Cost Phasing
Feasibility Module

- Feasibility Module describes how ports create financially feasible project plans that take into account all aspects of cost, risk, and reward.
- Identifies the metrics for the physical, commercial and financial components of project success and how the metrics can be measured and evaluated.
- Focuses on performing feasibility analyses specific to a port’s individual capabilities, markets, and competitive relationships.

*Consideration of NEPA compliance for projects requiring Federal Action is of particular importance during these efforts.*
Measure: Physical & Operational Performance

- Capital Resources
- Operating Resources
- Capacity and Productivity
Measure: Market & Financial Performance

- Revenue Forecast
- Cash Flow Modeling
- Capital Expenditure
- Operating Expenditure
Measure: Comparative Costs

NPV -$ M

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<td>Maintenance &amp; Repair</td>
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## Measure: Impacts

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<td>Institutional/Port User</td>
<td>Vessel turnaround time</td>
<td>Vessel traffic</td>
<td>Regional waterfront access</td>
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<td>Truck / train service time</td>
<td>Adjacent road/rail use</td>
<td>Regional road/rail use</td>
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<td>Social</td>
<td>Port safety</td>
<td>Protection of nearby community</td>
<td>Regional security</td>
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<td>Environmental/Economic</td>
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<td># of machines and operating hours</td>
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<td>Fuel / power consumption</td>
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<td>Facility runoff</td>
<td>Water quality</td>
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<td>Coastal environment</td>
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Measure: Risk

Examples:
- Cost of materials
- Revenue capture
- Construction delays
- Construction cost overruns
- Equipment acquisition delays
- Inflation
- Cost of raising finance
- Maintenance cost overruns
- Life cycle cost acceleration
- Force majeure
Evaluate: Delivery Approach

Common techniques:
- Cash flow evaluation
- Benefit-cost analysis
- Multi-criteria evaluation
Cash Flow Evaluation

Common techniques:
- Net Present Value (NPV)
- Internal Rate of Return (IRR)
Benefit Cost Analysis

• Measure the net welfare change over the life of a project

• BCA is a comparison of:
  • Economic Advantages – Benefits
  • Disadvantages – Costs

Resources:
• BCA Resource Guide
• OMB Circulars A-4 and A-94
• NCFRP Report 38
Evaluation of Alternatives' Performance. Criteria categories may include:

- **Financial**
- **Economic Impact**
- **BCR**
- **Operational**
- **Environmental**
- **Risk**

### Port Planning & Investment Toolkit

#### Evaluation of Alternatives' Performance

Criteria categories may include:

- **Financial**
- **Economic Impact**
- **BCR**
- **Operational**
- **Environmental**
- **Risk**

### Multi Criteria Evaluation

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<td>Land Utilization</td>
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Financing Module

- **Finance Module** helps project leads navigate a wide range of capital investment decisions, from simple to complex.

- Used for any number of capital investment activities including, but not limited to:
  - Asset-Backed and Lease Financing
  - Weighing Traditional vs. Alternative Financing
  - Project Finance Structuring
  - Evaluation and Implementation of Public-Private Partnerships
  - Procuring Government Loans and Grants
### PPIT Resources

- **Project Profiles/Case Studies**
- **Toolkit Checklist**
- **Sample Financial Model**
- **Helpful Resources**
  - Manuals and Guides
  - RFQs and Scopes of Service
  - Strategic/Master Plans
  - Feasibility Studies
  - EIS/EIR Documents
- **Glossary of Terms**

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<th>Resource Type</th>
<th>Title</th>
<th>Author</th>
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<td>Strategic/Master Plans</td>
<td>Application of Altitudes and Requirements for Port of Port</td>
<td>AECOM</td>
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<td>Martin Associates</td>
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**Appendices & Tools**

**Port Planning & Investment Toolkit**

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Want to Know More?.....

www.aapa-ports.org/toolkit
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Thank You

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