

Sustainable Port Master Planning

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What is Sustainable Port Master Planning?

- > A “Sustainable Port Master Plan” is one developed with a more complete understanding of all the issues facing a Port today, so that it can “sustain” one’s business into the future.
- > Scope is defined through a “port-specific” analysis that better defines the specific needs and elements of each Port’s “Plan”.



Current Method of Port Master Planning

Facilities master planning

- > Inventory and condition of assets
- > Transportation logistics
- > Maintenance, recapitalization, or improvement

Business planning

- > Economic payback
- > Cargo forecasting
- > Identify tenants/users



Traditional Port Planning Has Been Mostly “Cargo Based”

We’ve all seen these planning scopes:

- > Task 1 – Market Assessment or Cargo Forecast
 - Develop 20-year Cargo Projections

The One Thing We Know for Sure – The Cargo Forecast will be “Wrong”



Sustainable Approach To Port Master Planning

- > Start with an understanding of the biggest Risk to long-term success for the Port
- > The driver for successful business outcome is not always an economic one (e.g. cargo forecast)
- > Certain drivers can increase the risk for a negative outcome:
 - Environmental considerations (permitting, regulatory requirements, natural disasters)
 - Stakeholders not brought into process
 - Community concerns not addressed
 - Port Governance



A New “First Step” - Identify The “Risks”

- > Necessary to consider all risks to the Port’s long-term success
- > Risk Assessment
 - More than just an “add-on” to a typical feasibility or preliminary port plan
 - Comprehensive, systematic approach to port master planning
- > Needs to be Top-Down Approach With All Key Port Management Engaged
- > Start with defining the Port’s Mission, Objectives, and Goals
- > Identify Business Case Risk Management and Planning
 - Defining Threats
 - Likelihood
 - Severity
 - Risk Identification
 - Alternatives



Port Sustainable Master Plan Elements

- > Understand mission and risks
- > Market plan
- > Facility plan
- > Business plan
- > Financial plan
- > Master plan
- > Environmental assessment plan
- > Social/community engagement plan

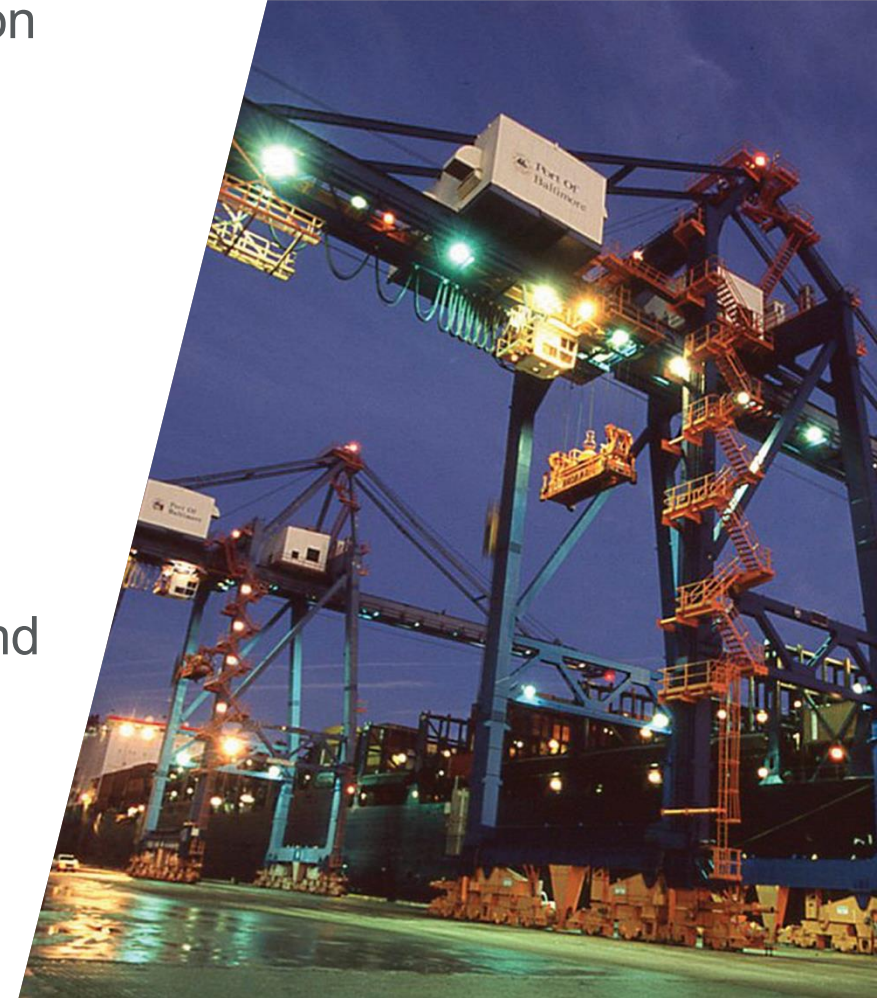


Comprehensive Sustainable Port Master Plan Approach

- > The process and products are customized to fit the port's situation
- > Flexible and modifiable
- > Identifies and coalesces leadership and staff priorities
- > Stakeholder engagement is critical

Results

- > Integrating economic, environmental, and social concerns throughout the entire planning process
- > Identifies development 'trigger points' or areas to manage risk and incorporate them into the "Plan"



Examples of Non-Traditional “Risks”

Port of Long Beach

- > Issue: Community’s environmental concerns
- > Action: Becoming a “Green Port” with Sustainable Design Guidelines

Port of Baltimore

- > Issue: Port’s Dredge Disposal Program Not Understood
- > Action: Initiate a Public “Harbor Team” to garner stakeholder support



Sustainable Port Master Plan Value to Port

Optimize economic returns

- > Improve revenue streams
- > Successfully compete in evolving marketplace

Improve environmental results

- > Minimize regulatory impacts
- > Utilize technological advancements

Leverage social engagement

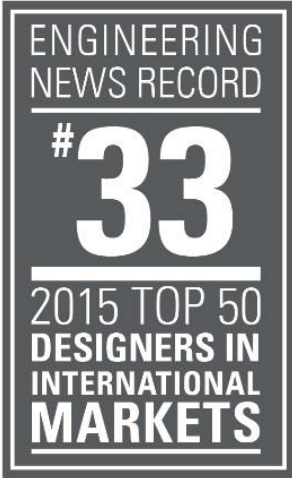
- > Public participation leads to better planning, shortened schedules, and durable results
- > Collaborating with stakeholders to improve port stability, enhance operational effectiveness, improve project efficiencies & timelines



About Cardno

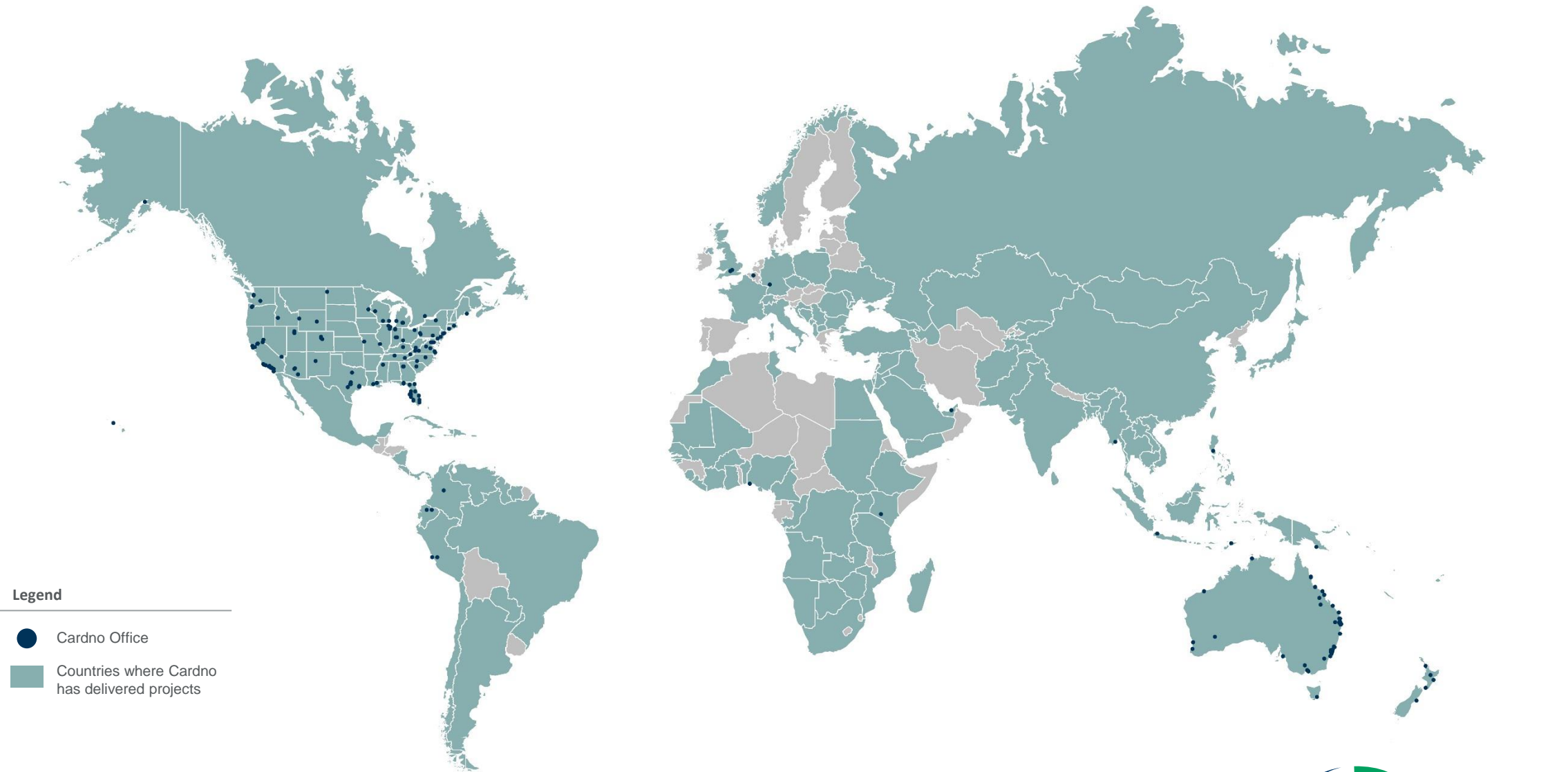
Cardno: Global reach, local experience

- > Founded in 1945 in Brisbane, Australia
- > Industry-recognized firm with domestic and international operations



GLOBAL	AMERICAS
PEOPLE	PEOPLE
6500 ⁺	3500 ⁺
OFFICES	OFFICES
200 ⁺	150 ⁺
COUNTRIES CARDNO HAS DELIVERED PROJECTS IN	
100 ⁺	

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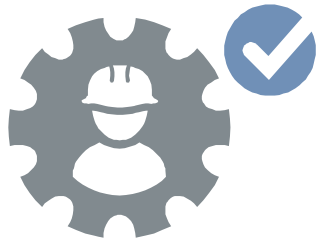
PLANNING



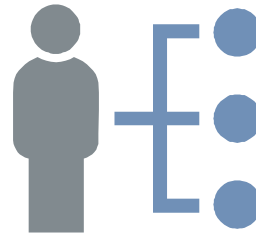
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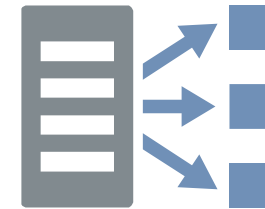
ENGINEERING



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Cardno's Port Practice "Problem Solving"

Provide Port Strategic, Business, and Facility Planning Services with focus on Problem Solving

- > Strategic and Master Plans
- > Feasibility Studies
- > Operational Studies
- > Conceptual Design
- > Capital Costs Estimates
- > Environmental Studies and Permits, including dredged material disposal
- > Financing Due Diligence and Privatization Concession Support

Provide 'Program Management Type Services

- > Preliminary Designs and Design Reviews
- > Asset Management and Facility Conditions Reviews
- > Design/Build Procurement Support
- > Construction Oversight

Thank you

For more information

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