



Managing Big Data

AAPA Facilities Engineering Seminar

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Port of San Diego Overview

- The Port of San Diego celebrated its 55th anniversary this year.
- The Port of San Diego has a partnership with its 5 member cities.
- Port of San Diego is the 4th Largest of California's 11 Public Ports.
- California's 11 ports comprise one of the most competitive port systems in the World, importing 50% of America's goods.
- San Diego is one of 17 Strategic Ports nationally.

Port of San Diego Jurisdiction

34
miles of waterfront

2,403
acres of land

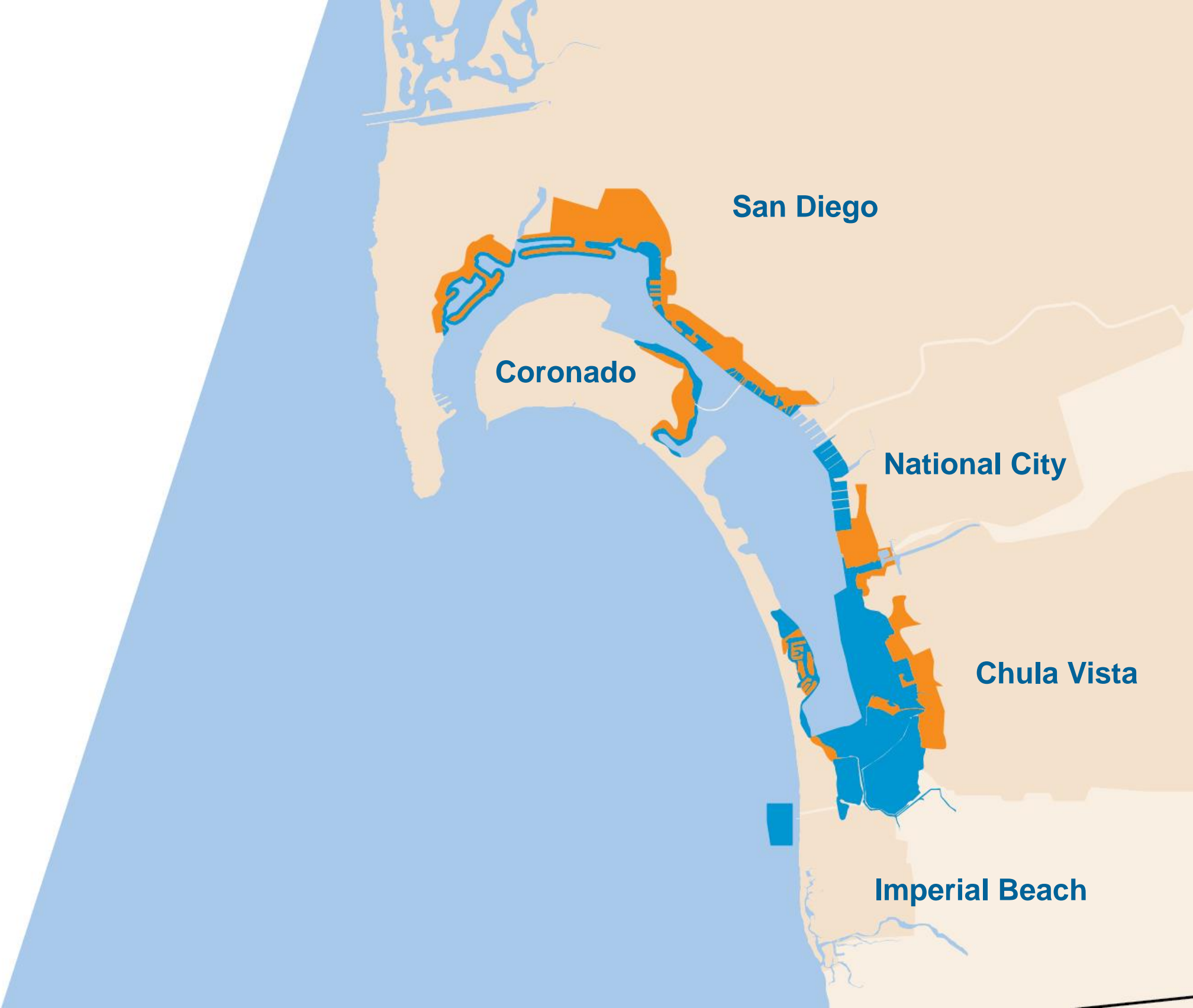
3,535
acres of water



Port Tidelands



Submerged Tidelands



Economic Engine

More than \$1.7 Billion Invested Since 1963



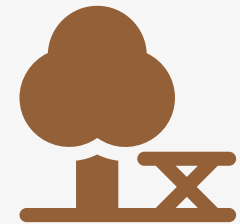
- Two Maritime Cargo Terminals
- B Street Cruise Ship Terminal
- Port Pavilion on Broadway Pier
- Expansion of NC Marine Terminal Wharf



- SD Convention Center & Expansion
- Airport Terminals and Expansions
- Shelter Island
- Harbor Island



- South Bay Wildlife Refuge
- Wildlife and Habitat Preservation

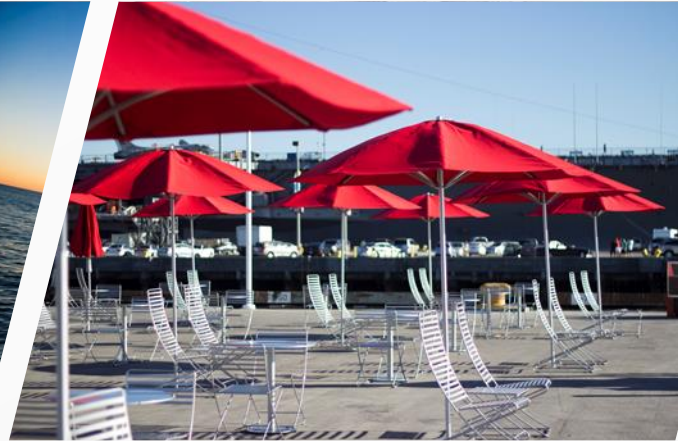


- 22 Dedicated Public Parks
- National City Marina Basin
- North Embarcadero Visionary Plan Phase I



PORT of SAN DIEGO

Experiences



5

public piers

9

museums &
attractions

17

hotels

22

parks

70

artworks

73

restaurants

80+

sponsored events

What is Big Data Management?

- Collection
- Organization
- Maintenance



Why Big Data Management?

Growing Data

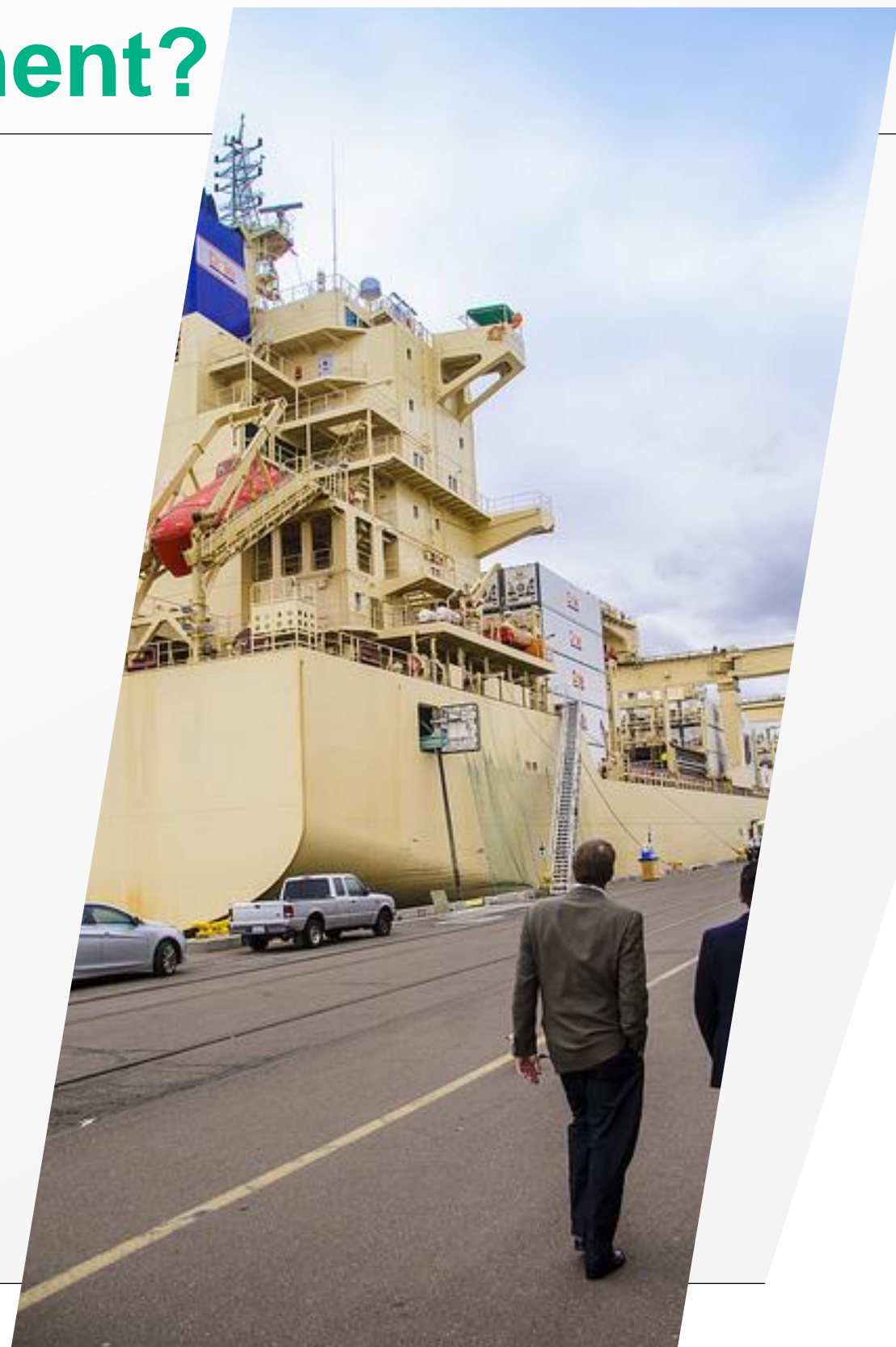
Ever-growing databases that show no signs of stopping

Data Quality

The data silos and growing data make it difficult to confirm data quality.

Data Silos

Large amounts of databases that are separate from each other with little to no transfer of information



Big Data Management Benefits

- Improved data quality
 - Data quality assurance process
 - Living database
- Increased efficiency
 - Data Entry
 - Real Time Access
 - Eliminating silos
- Improved analytics
- Cost Savings



Data Management Project Team

Core team

- Program Manager
- Super User
- Data storage and data management specialists
- Data Analysts

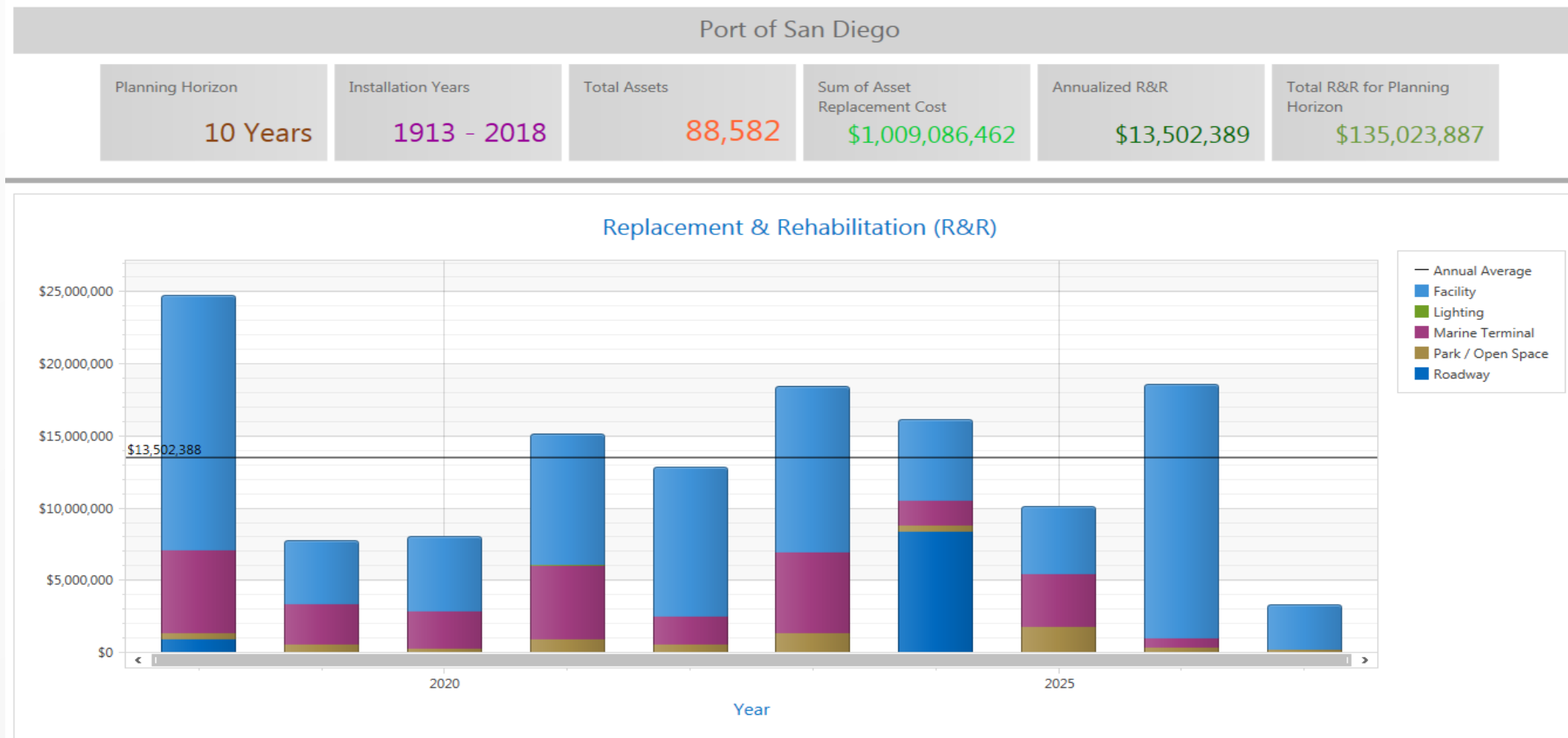
Governance Committee

- Program Manager
- Executive Leadership
- Information Technology
- Department Representatives
- Super User



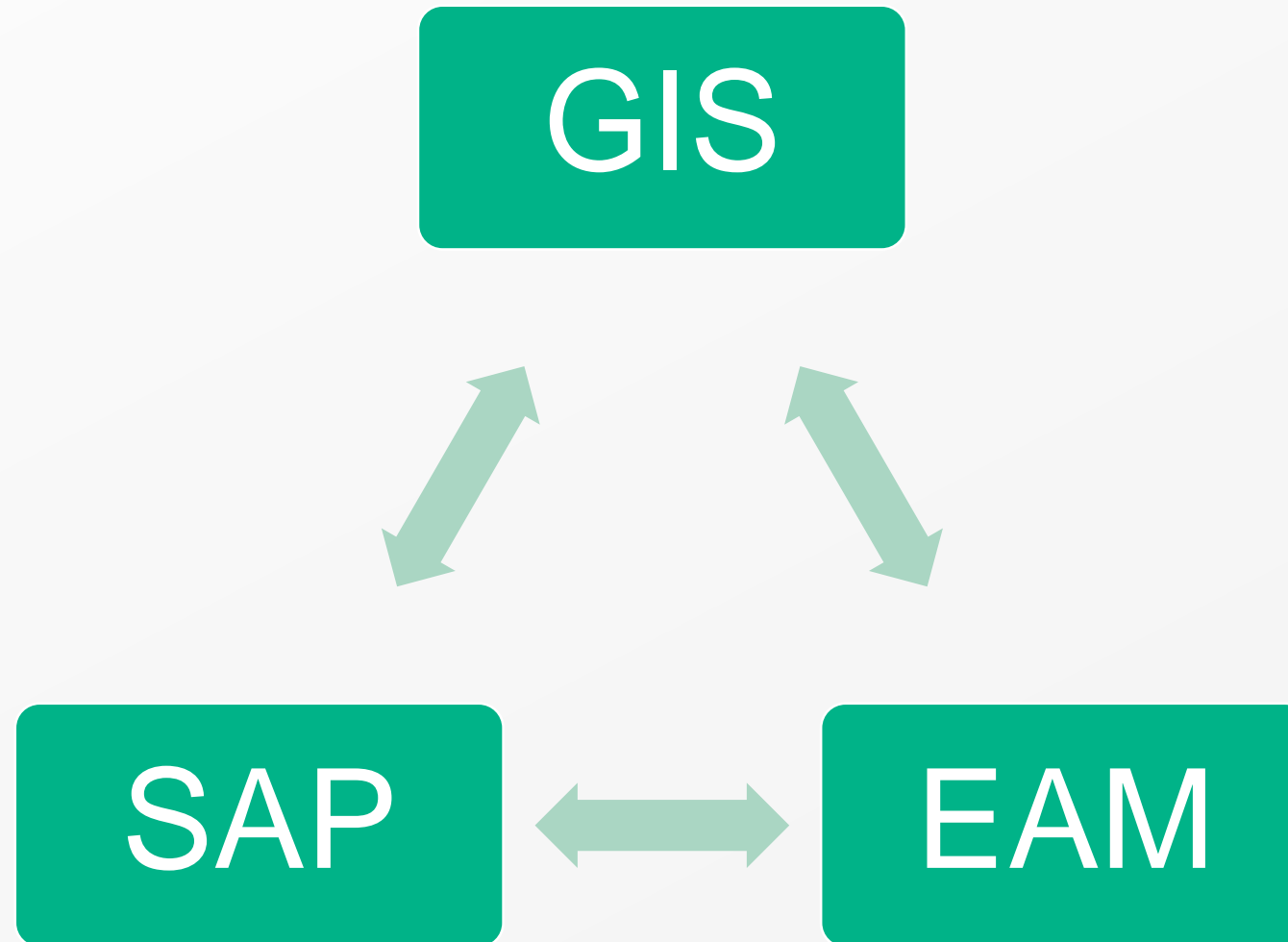
The Port Of San Diego's Current Landscape

- Over 88,000 Assets and counting
- Data sources include GIS, SAP, and Excel
- Analytical software to evaluate asset data and prioritize replacement.



Port Of San Diego's Future Landscape

- Integrated Enterprise Systems



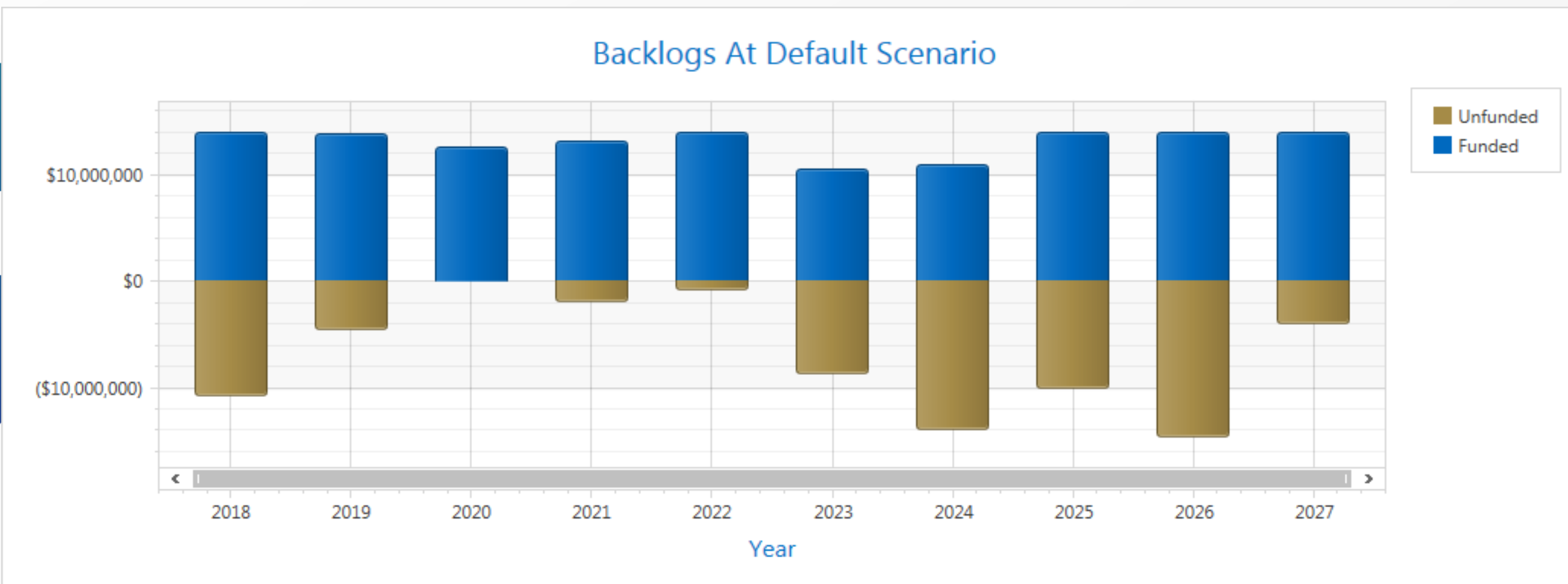
A wide-angle photograph of the San Diego skyline across the water. In the foreground, a large white cruise ship with multiple decks is docked at a pier. Behind it, several tall, modern skyscrapers with glass facades rise into a clear blue sky. Two yellow construction cranes are visible, one near the center and one further back, indicating ongoing development. The water in the foreground is a deep blue with gentle ripples.

Data Collection

- A review of available as-builts and record drawings
- Field verification of as-built research
- Condition assessment of critical assets
- Calculation of remaining useful life, potential of failure, and consequence of failure
- Geolocation

Analytics

- Real time data
- Scenarios
- Project Development



Key Performance Indicators

- Decrease in reactive maintenance
- Increase in planned maintenance.
- Improve long range capital planning forecasts, balanced 5 year spending



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Thank you.