

ENVIRONMENT CONSIDERATIONS

IN TERMINAL DEVELOPMENT AND OPERATIONS

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SUSTAINABILITY

SOIL

WATER

GREEN PORT

POLICY

SEDIMENTS

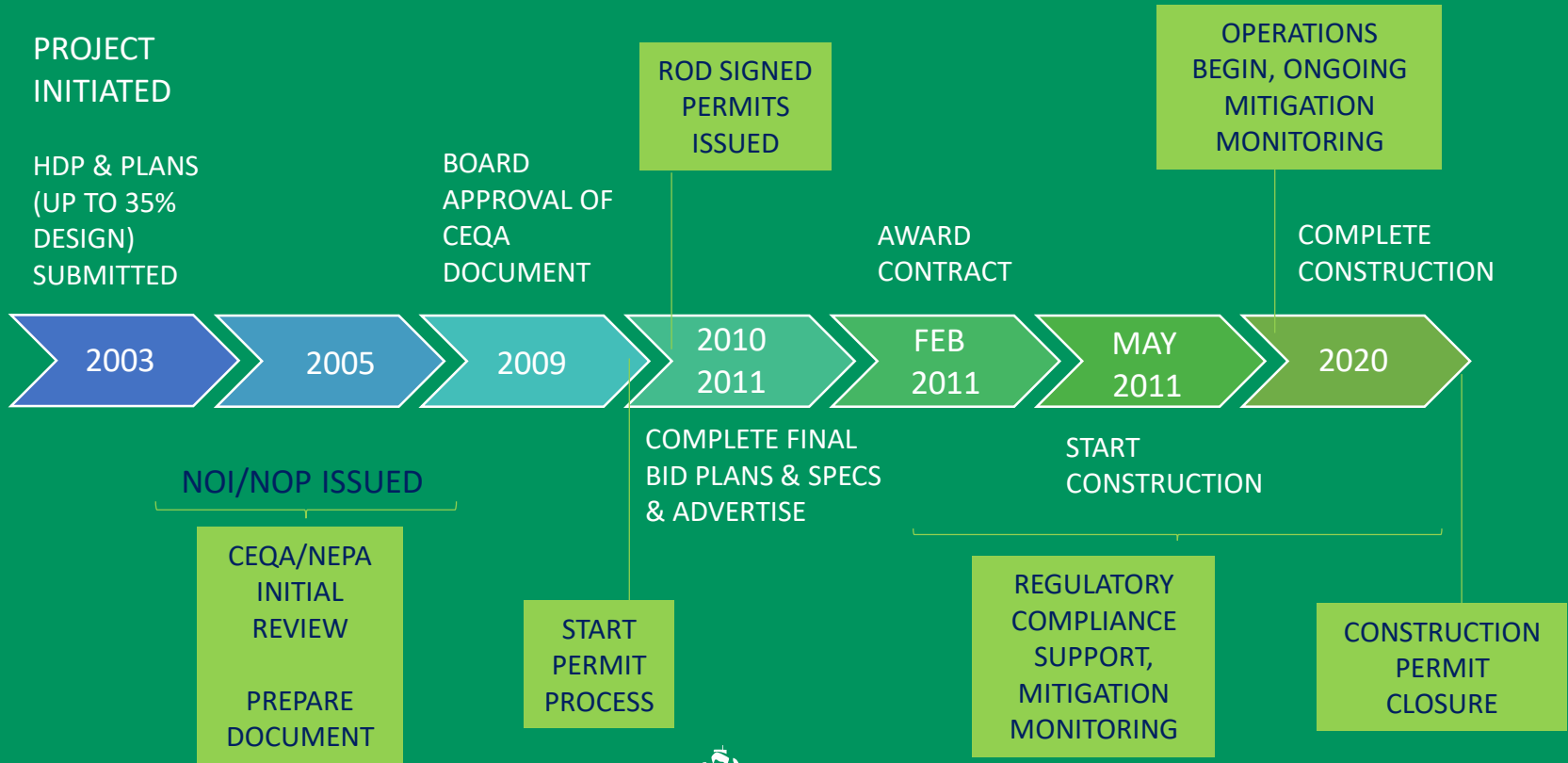
COMMUNITY
ENGAGEMENT

AIR

WILDLIFE



DEVELOPMENT PROJECT SEQUENCE



A blurred background image of a modern building with large windows and a blue sky. The text is overlaid on the image.

SUSTAINABILITY

IMPLEMENT SUSTAINABLE PRACTICES IN DESIGN,
DEVELOPMENT AND OPERATIONS



CLIMATE CHANGE

PLAN FOR ADAPTATION AND RESILIENCE



SOILS

RETURN LAND TO PRODUCTIVE USE

A blurred background image of a lake with several swans in the foreground. In the distance, there are buildings and a red structure, possibly a crane or a tower, under a clear blue sky.

WATER & SEDIMENT

IMPROVE WATER QUALITY; BENEFICIALLY REUSE SEDIMENTS

WATER RESOURCES ACTION PLAN



PREVENT PORT
OPERATIONS
FROM
DEGRADING
WATER &
SEDIMENTS



SUPPORT
BENEFICIAL USES
OF WATER &
SEDIMENTS BY
ADDRESSING
IMPACTS OF
OPERATIONS –
PAST, PRESENT
AND FUTURE

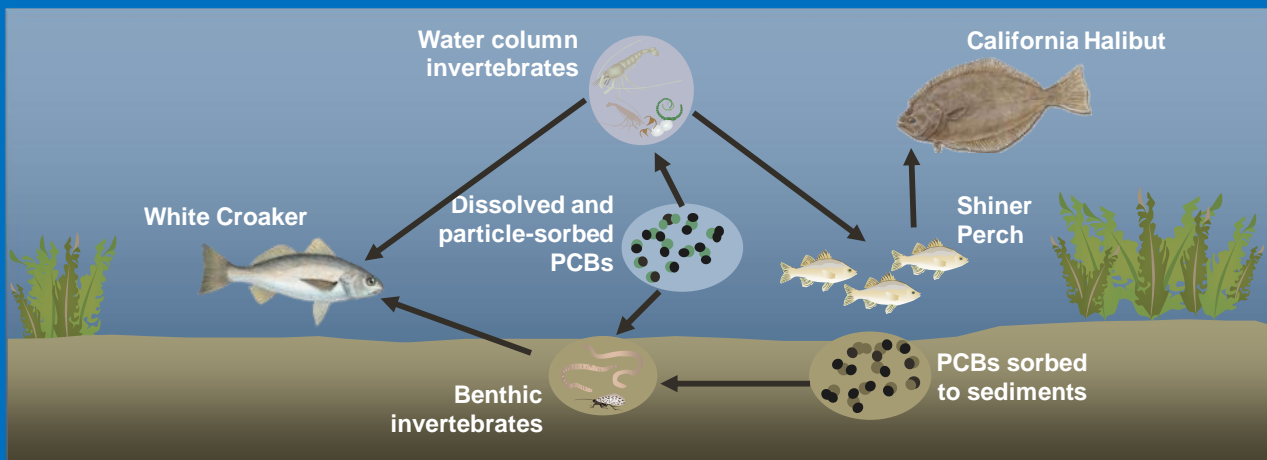


STORMWATER PROGRAM

INDUSTRIAL, CONSTRUCTION, MUNICIPAL & ENFORCEMENT

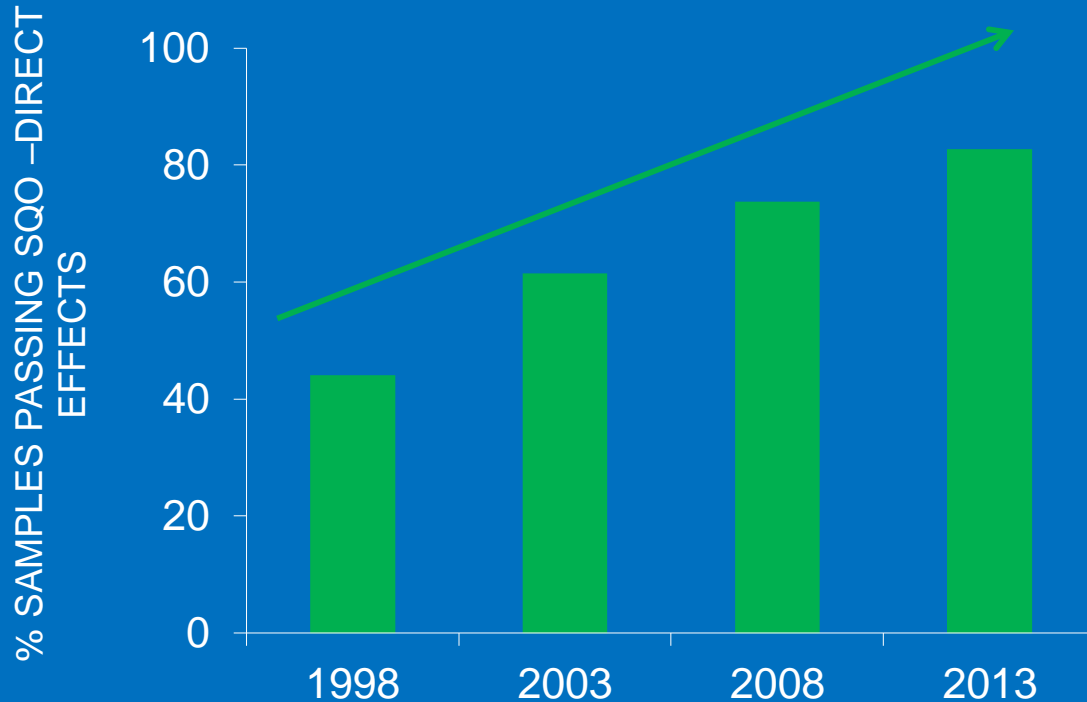
TOTAL MAXIMUM DAILY LOAD

REMOVE LEGACY CONTAMINATES FROM FISH TISSUES



SEDIMENT QUALITY OBJECTIVES

REDUCE CHEMICAL CONCENTRATION, TOXICITY,
BENTHIC IMPAIRMENT



An aerial photograph of a city at dusk or dawn. The city lights are visible in the background, and a large industrial facility, possibly a port or refinery, is in the foreground. The facility has several large structures and a body of water nearby. The sky is a mix of blue and orange.

LANDFILL

ACCOMMODATE DREDGE MATERIALS, REGIONAL SEDIMENTS

LOW-IMPACT DEVELOPMENT

ANAHEIM STREET

A group of seals is resting on the deck of a red boat. The background is a blurred green wall. The text 'WILDLIFE' is overlaid in the center in white, bold, sans-serif font.

WILDLIFE

INCREASE DIVERSITY, POPULATION OF SPECIES

SAN PEDRO BAY BIOLOGICAL SURVEY

1988 SURVEY

Echinoderms
1%
Mollusks
9%
Crustaceans
5%
Polychaete
Worms
80%



2000 SURVEY


Echinoderms
1%
Mollusks
9%
Crustaceans
23%
Polychaete
Worms
65%



2008 SURVEY

Echinoderms
2%
Mollusks
19%
Crustaceans
30%
Polychaete
Worms
48%





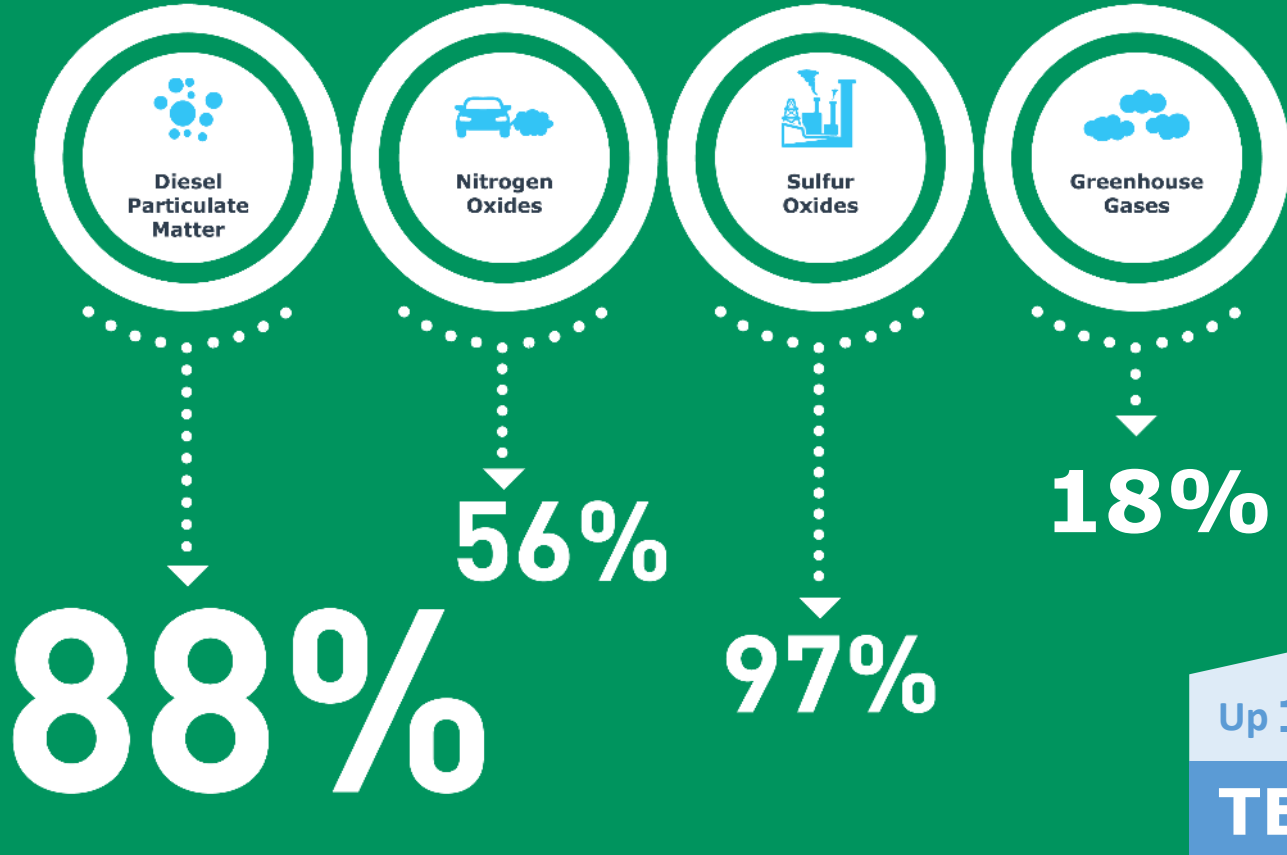
AIR QUALITY

DECREASE EMISSIONS FROM PORT OPERATIONS



SOURCES OF EMISSIONS

VESSELS, HARBOR CRAFT, TRUCKS, CARGO-HANDLING
EQUIPMENT, LOCOMOTIVES



*2017 EMISSIONS INVENTORY COMPARED TO 2005 LEVELS

CITY OF LOS ANGELES

ALAMEDA ST.

CITY OF LONG BEACH

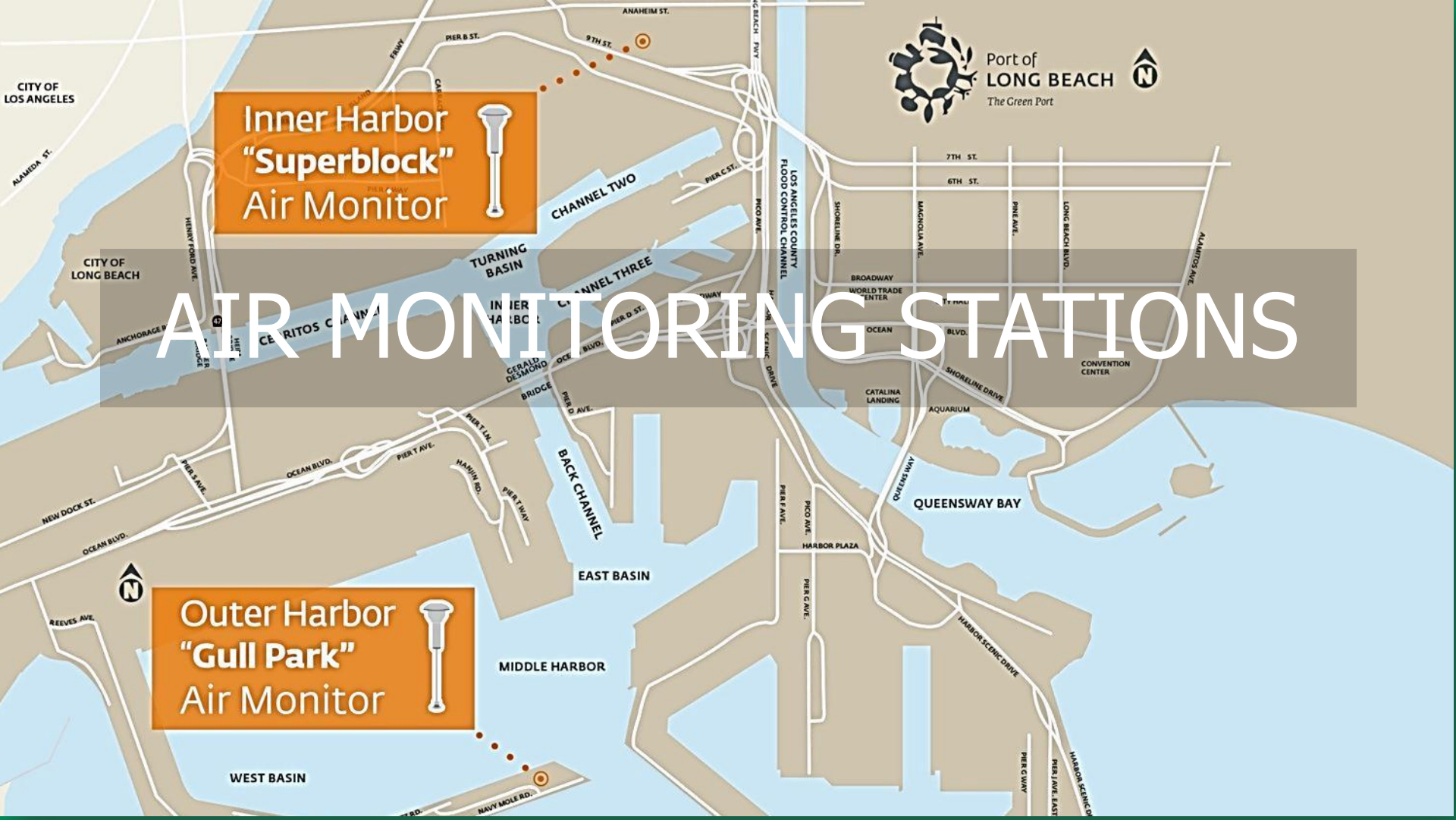


Inner Harbor "Superblock" Air Monitor



AIR MONITORING STATIONS

Outer Harbor "Gull Park" Air Monitor





GREEN FLAG PROGRAM

VOLUNTARY VESSEL SPEED REDUCTION



Port of **LONG BEACH**
ENVIRONMENTAL ACHIEVEMENT

Port of **LONG BEACH**
ENVIRONMENTAL ACHIEVEMENT

Port of **LONG BEACH**
ENVIRONMENTAL ACHIEVEMENT

A large container ship, painted in a vibrant red and white livery, is docked at a busy port. The ship is surrounded by numerous blue and white container cranes. In the background, a city skyline is visible under a clear blue sky. The water is a deep blue, and a small boat is seen in the distance. The overall scene is a bustling maritime hub.

LOW-SULFUR FUELS

INCENTIVES FOR VESSEL OPERATORS



GREEN SHIP AWARDS

INCENTIVES FOR LOW-EMISSION VESSELS

The background image shows the stern of a boat with a yellow buoy hanging from a yellow bar. Black power cables are visible, connected to a power source on the boat's deck. The boat's hull is red with green accents. The water is blue and slightly rippled.

AT-BERTH POWER

ALTERNATIVE TECHNOLOGIES

A futuristic, aerodynamic blue truck is shown driving on a road. The truck has a very low profile and a large, curved windshield. The background is a blurred landscape with green fields and a clear sky, suggesting motion. The text "CLEAN TRUCKS" is overlaid in large white letters across the middle of the image.

CLEAN TRUCKS

TRANSITION TO CLEANEST TECHNOLOGIES

CLEAN AIR ACTION PLAN





Greenhouse
Gases
Goal by
2030



REDUCE

40%



Greenhouse
Gases
Goal by
2050



REDUCE

80%



2030

CARGO-HANDLING EQUIPMENT

ZERO EMISSIONS

A red and a blue semi-truck are driving on a highway towards the camera. The red truck is on the left, and the blue truck is on the right. The background is a bright, hazy sky. The text '2035' is overlaid in the center in a large, blue, sans-serif font.

2035

ALL PORT TRUCKS

ZERO EMISSIONS

LONG BEACH CONTAINER TERMINAL

STATE-OF-THE-ART, GREENEST





ELECTRIFIED OPERATIONS

MOST ADVANCED TECHNOLOGIES

An aerial photograph of a city street grid, overlaid with a prominent red and white striped path that winds through the streets. The path starts from the top left and moves towards the bottom right. The background is a blurred cityscape under a clear sky.

'GOAL ZERO' CHALLENGES

EMERGING TECHNOLOGIES; TOUGH DUTY CYCLES;
LIMITED INFRASTRUCTURE; HIGH COSTS



'GOAL ZERO' STRENGTHS

ESTABLISHED GOALS; MORE INCENTIVE DOLLARS;
INCREASING INTEREST; PARTNERSHIPS

The background of the slide is a blurred photograph of a highway at dusk. Two large trucks are visible: a red one on the left and a white one on the right. The sky is a deep blue, and the overall scene is out of focus, emphasizing the text overlay.

ROADMAP TO ZERO

DEMONSTRATION PROJECTS; FEASIBILITY EVALUATION

An aerial view of a port area with numerous red and white cranes. In the foreground, a red ship is docked. The background shows a cityscape under a clear sky.

TECHNOLOGY ADVANCEMENT

ACCELERATE VERIFICATION AND AVAILABILITY

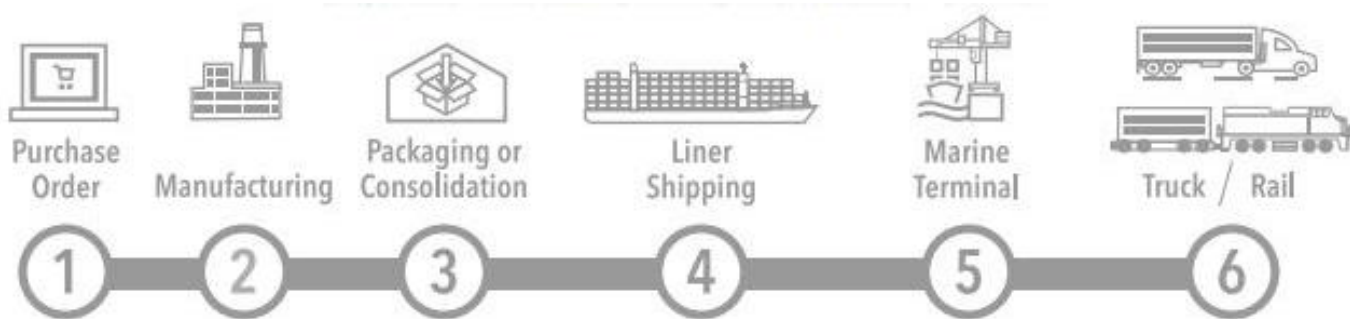


ENERGY RESILIENCY

RELIABILITY, COST-COMPETITIVE AND GREEN

GE TRANSPORTATION

Delivering cloud-based cargo data insights





COMMUNITY PARTNER

INVOLVE, INFORM AND ENGAGE



COMMUNITY GRANTS

MITIGATING NEGATIVE IMPACTS ON THE COMMUNITY

THANK YOU



@PortofLB



@PortofLongBeach



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POLB.com

www.polb.com/environment

