

Toward an Ecological Port

Taiwan International Ports Corporation
President Tien-Kuei Kuo
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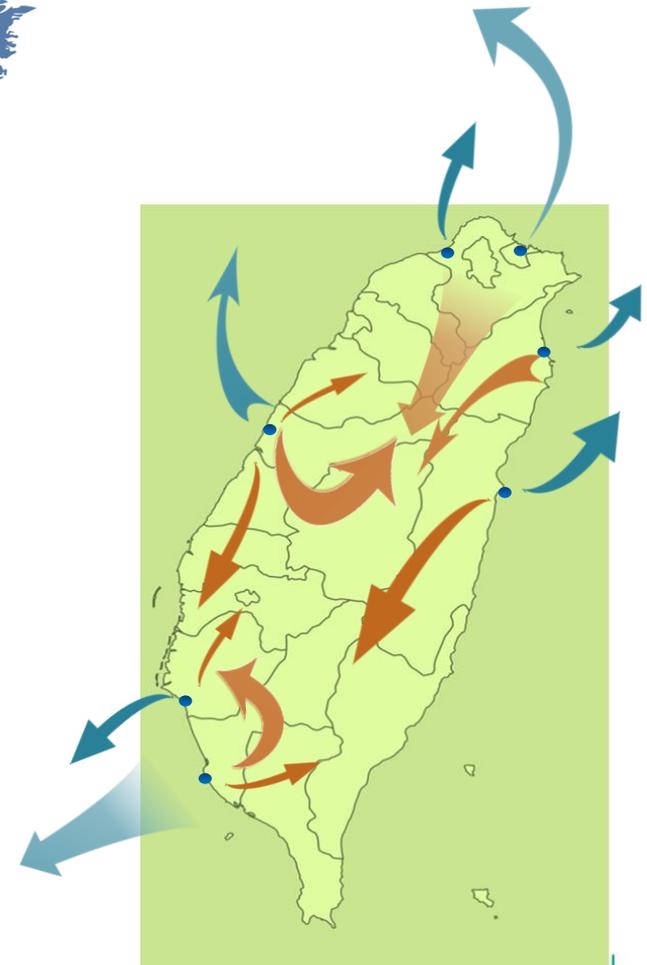
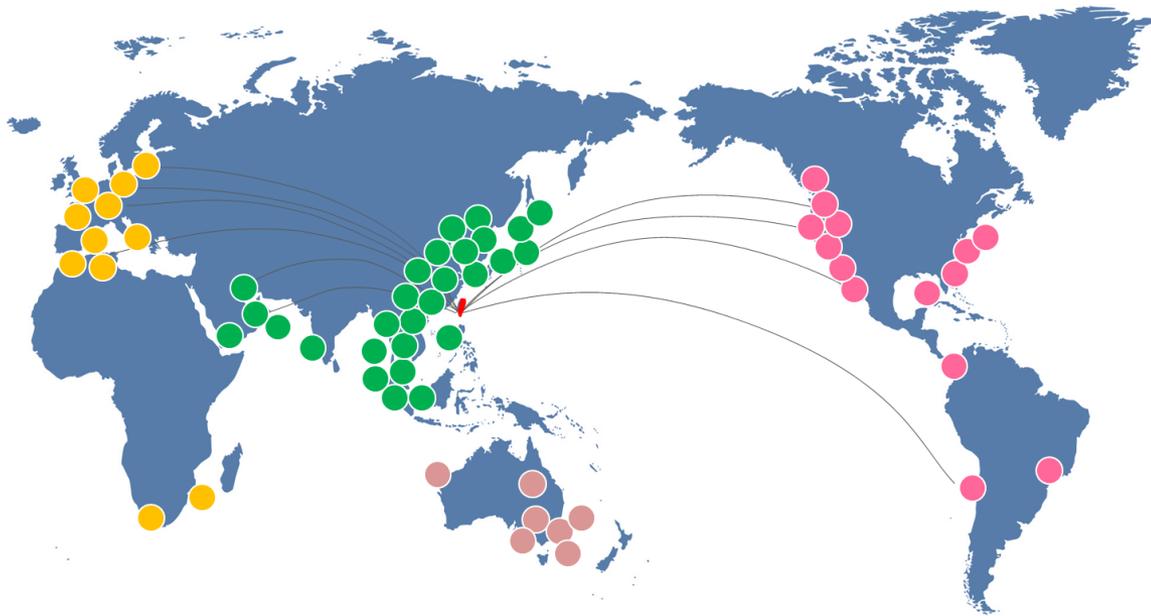
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- **Ecologistics in Kaohsiung Port**
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Introduction

- Port transportation is vital to the economy and livelihood of Taiwan



Energy: 98% imported

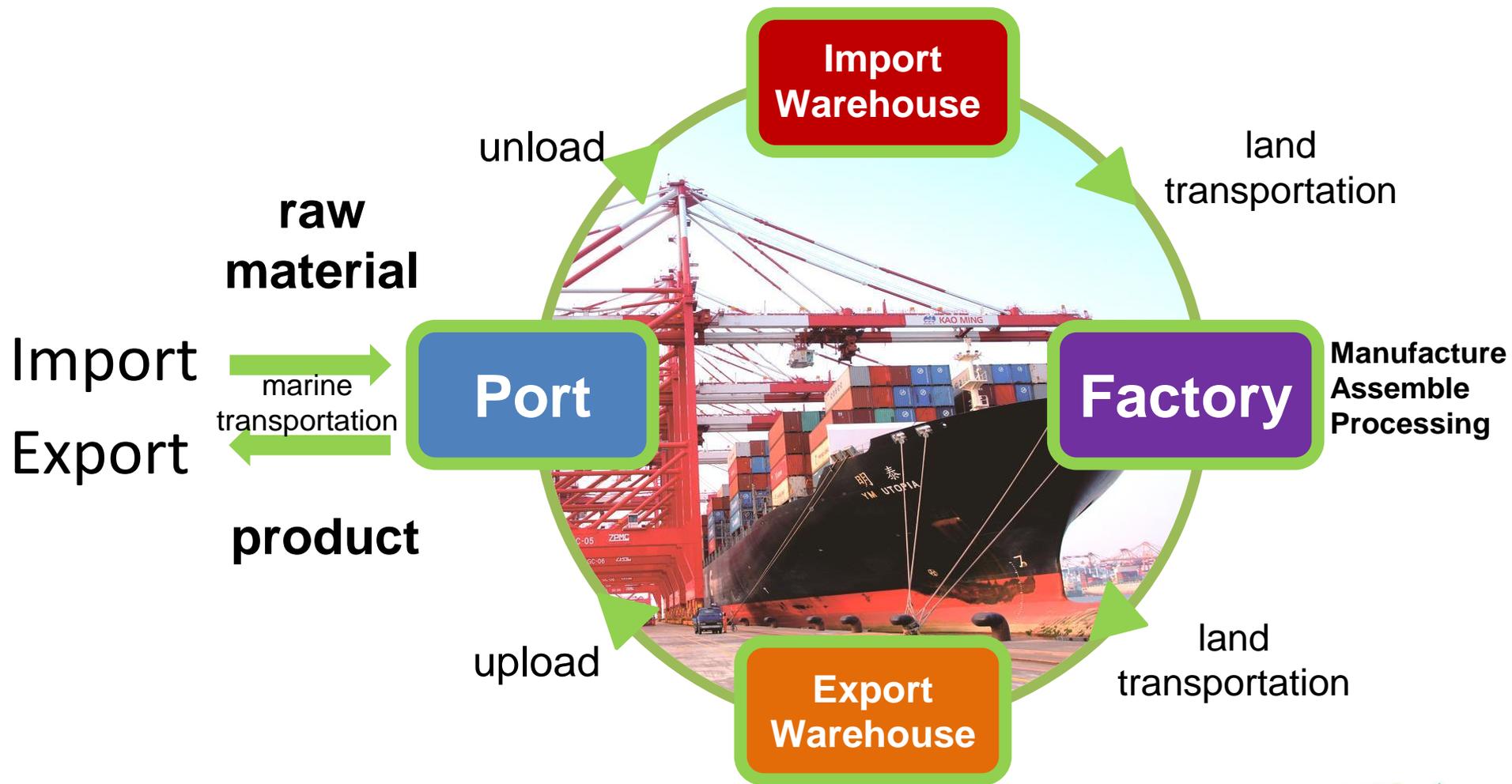


Food: 70% imported



Introduction

■ Ports are essential





Introduction

■ Environmental issues: Air pollution as an example

Marine transportation

SO_x

NO_x



Cargo handling

PM



Land transportation

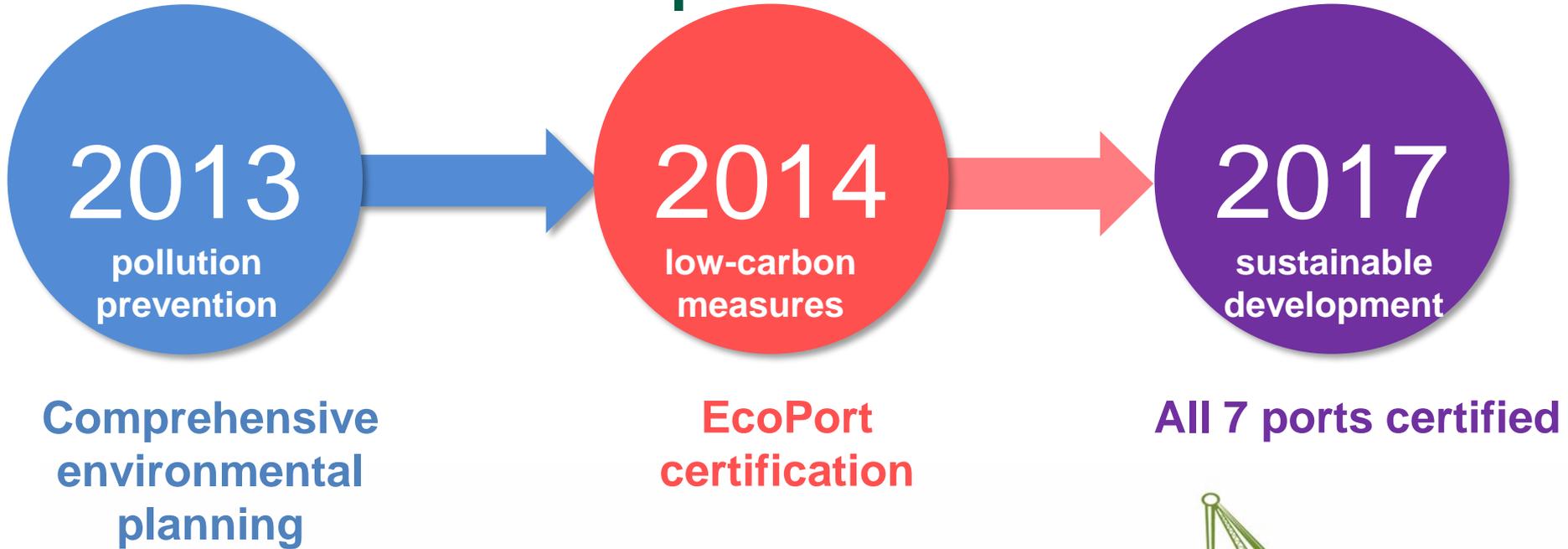
CO₂





EcoPort Establishment

- **Balancing between economic development and environmental protection**





EcoPort Establishment

Reduce environmental impact

SOx

NOx

PM

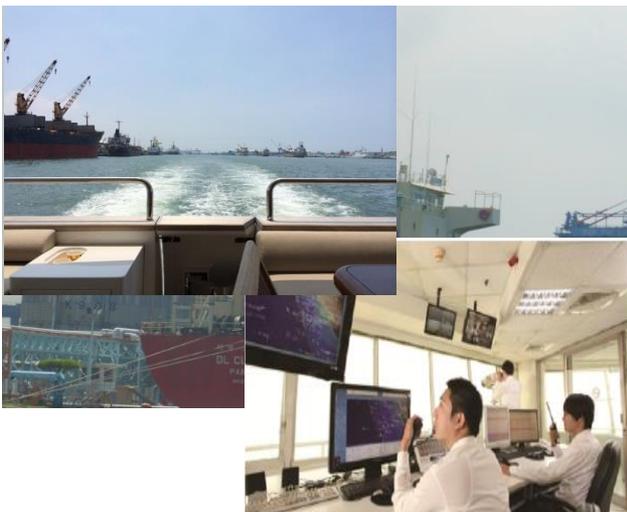
CO₂



- Low-sulfur fuel
- Vessel speed reduction

- Shore power for vessels
- Enclosed handling units

- Automatic gates
- Car washing lane





Establishment of EcoPort

■ Port City- Kaohsiung Port

Taiwan's No.1
commercial
port

1/2

national cargo
throughput

Asia's 1st
EcoPort

Certified in
2014



Environmental
friendly
development

**Biodiversity +
economic &
cultural
development**

Value-added
service

**Ecologistics =
Lower carbon
emission**





Ecologistics in Kaohsiung Port

■ Versatile ecologistics

Combined resources
efficient transportation

Low-impact development
reduce carbon emissions





Ecologistics in Kaohsiung Port

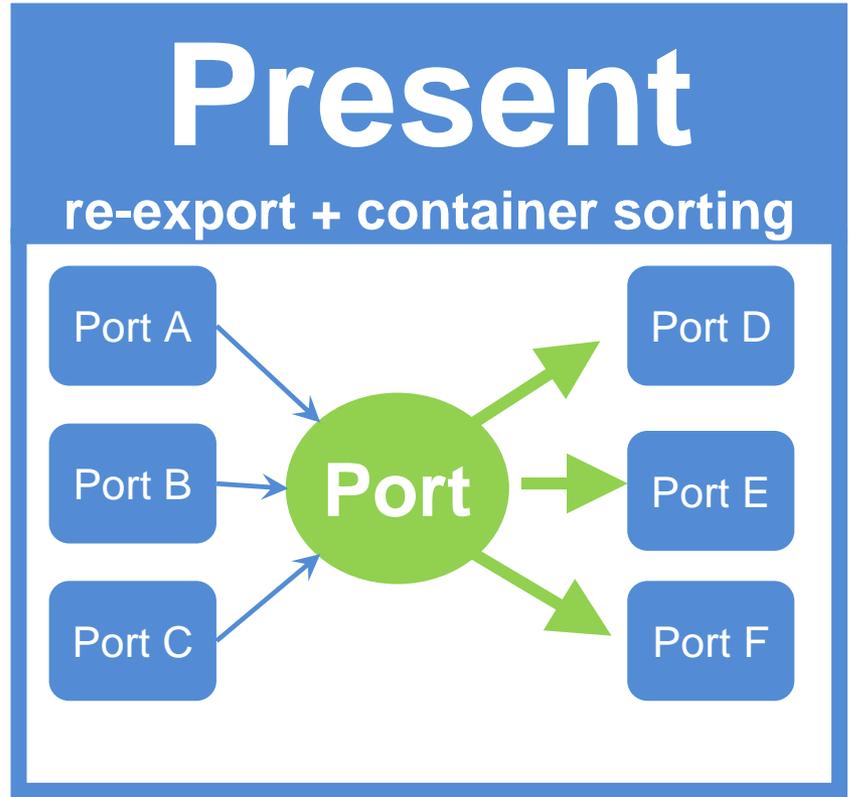
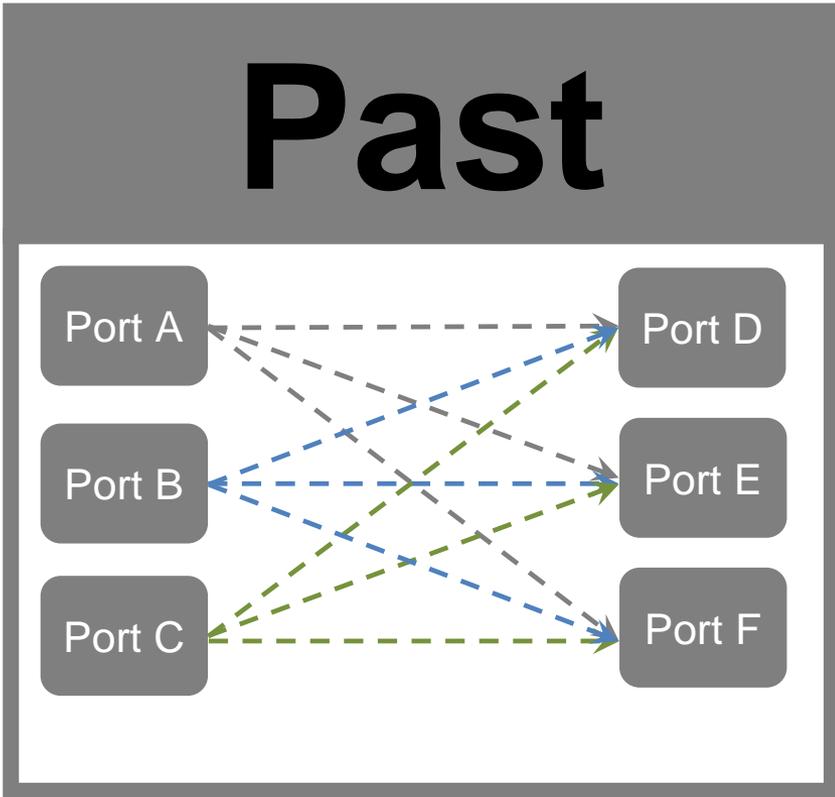
■ Cargo: Combined resources, efficient transportation

Multi-country Cargo Consolidation

Added-value

Expected Benefits

- Efficiency ↑
- Cost ↓
- Pollution ↓





Ecologistics in Kaohsiung Port

■ Cargo: Combined resources, efficient transportation

Free trade ports



Result
Delivery distance ↓
Product value ↑



Components in



Out to downstream manufacture countries

Free trade zone

Storage, delivery, processing, assembly, product QA/QC



Ecologistics in Kaohsiung Port

■ Cargo: Combined resources, efficient transportation

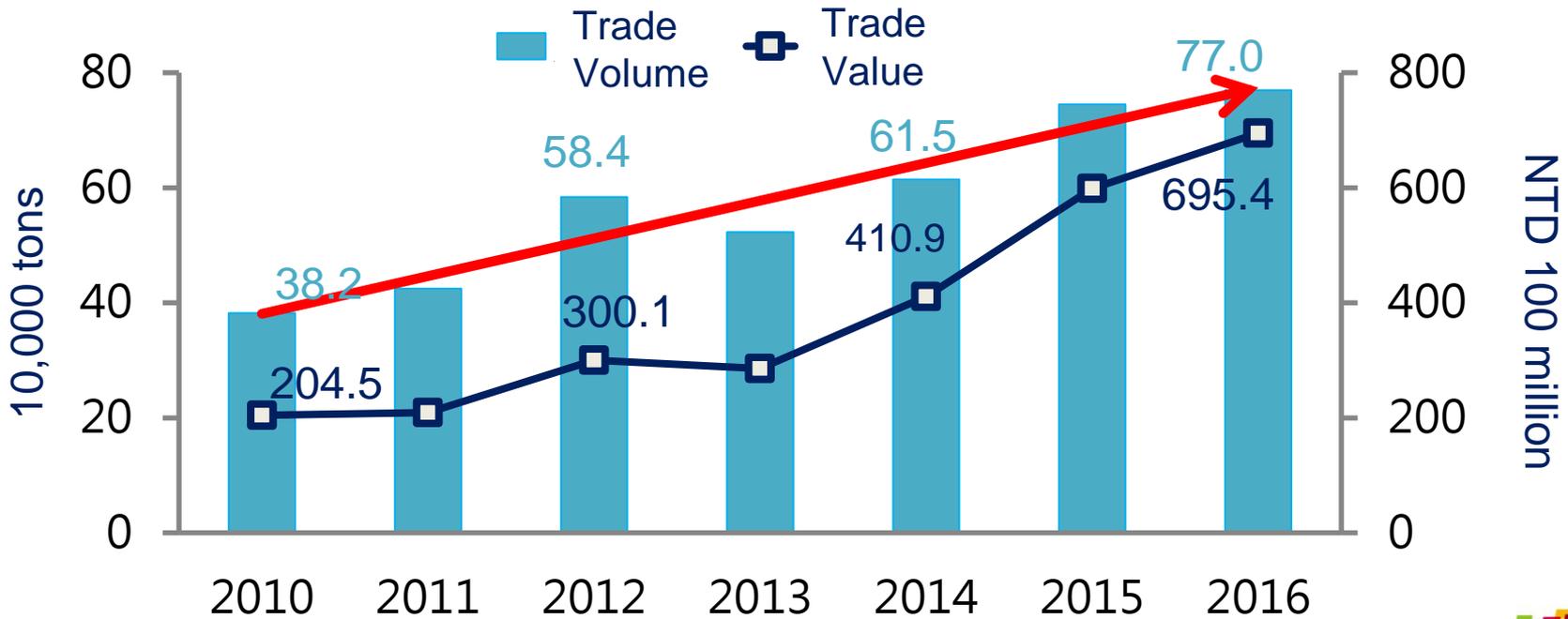
Free trade zone



Result

- Added 31 tenants
- Continuous growth

Traded Volume and Value in FTZ





Ecologistics in Kaohsiung Port

Travel: Public transportation integrated



Cruises



LRT



MRT





Ecologistics in Kaohsiung Port

Low impact development: Land rehabilitation

- Brownfield remediation



Result

- Avoiding 2nd time excavation
- Reduced truck transportation by 4,400 journeys



第I區 第II區 第III區 第IV區 第V區 第VI區



Ecologistics in Kaohsiung Port

Low-impact development : Eco-friendly

- Green Building Standard Terminal

Silver certified

Result

- Ecofriendly environment
- New tourist attraction





Ecologistics in Kaohsiung Port

■ Low-impact development: Ecological compensation

Wild birds
reserve

Creative Coexistence

Result

- 10.6 ha nature reserve



Creative coexistence with nature





Ecologistics in Kaohsiung Port

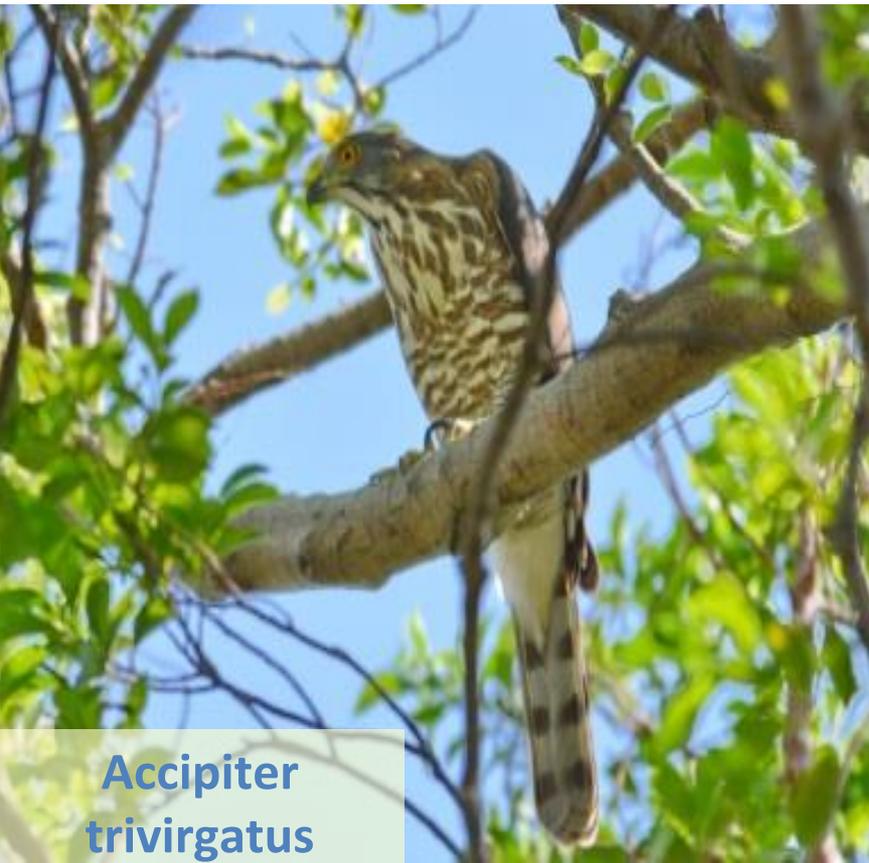
■ Low-impact development: Ecological compensation

- Wild birds reserve

Increase natural habitat

Result

- Shelter for migratory birds



Accipiter trivirgatus



Cyanoptila cyanomelana



Ecologistics in Kaohsiung Port

■ Low-impact development: Ecological compensation



Wild birds
reserve

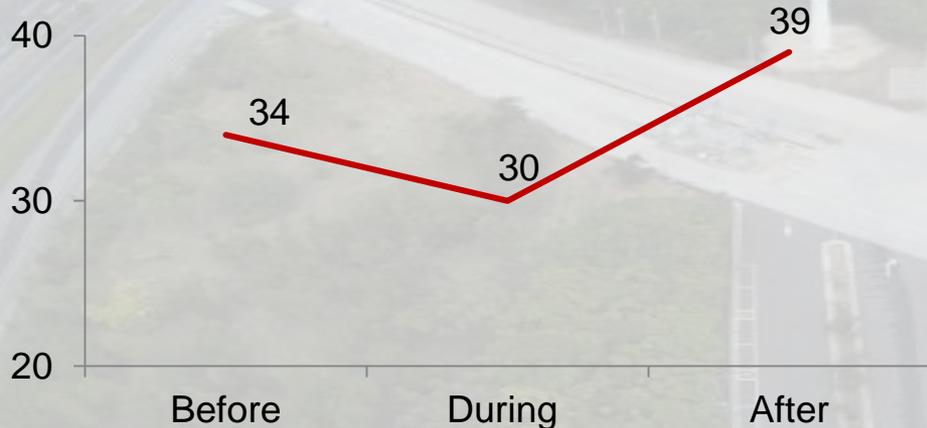
Biodiversity ↑

Result

• Bird Species ↑



Number of Bird Species
(before and after construction)





Ecologistics in Kaohsiung Port

■ Low-impact development: Industry transformation

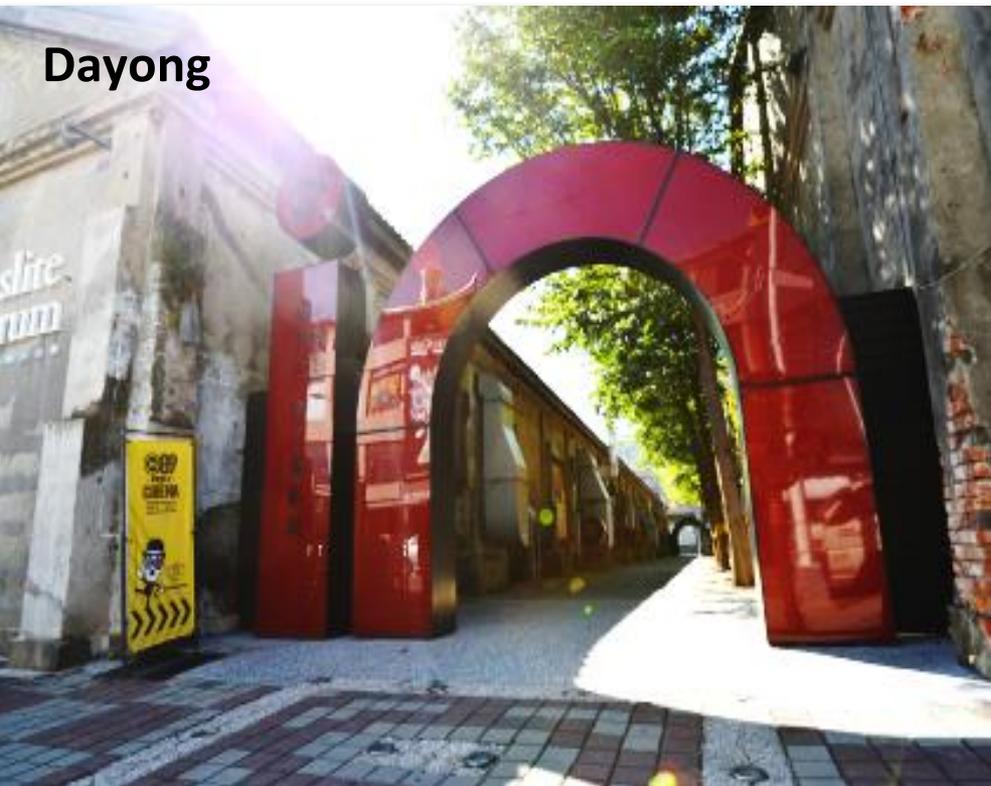
- Port city sustainable development

Rejuvenation

Expected results

- Versatile logistics
- Meeting the triple bottom line

Dayong





Ecologistics in Kaohsiung Port

■ Low-impact development: Industry transformation

- Port city sustainable development

Rejuvenation →

Expected results

- Versatile logistics
- Meeting the triple bottom line

Dayi





Ecologistics in Kaohsiung Port

■ Low-impact development: Industry transformation

- Port city sustainable development

Rejuvenation

Expected results

- Versatile logistics
- Meeting the triple bottom line



Penglai



Ecologistics in Kaohsiung Port

■ Low-impact development: Industry transformation

- ■ ■ ■ ■ ■ ■ ■
- Port city sustainable development
- ■ ■ ■ ■ ■ ■ ■

Rejuvenation



Expected results

- Versatile logistics
- Meeting the triple bottom line

Terminal



Port





Conclusions

■ TIPC's vision & goals for EcoPort

Eco-Island

Science Park

Asia New Bay

- Implement ecologistics and create a better living environment
- Establish environmental management regulations & increase competence
- Follow government policies & create Asia's future bay area

An aerial photograph of a city harbor, likely Hong Kong, featuring a prominent skyscraper (the Bank of China Tower) and a large stadium (the Hong Kong Sports and Exhibition Centre) near the waterfront. The city is densely packed with buildings, and the harbor is filled with water and boats.

**Change the PORT,
Change the WORLD**

Thank you for listening