

Unified Port  
of San Diego

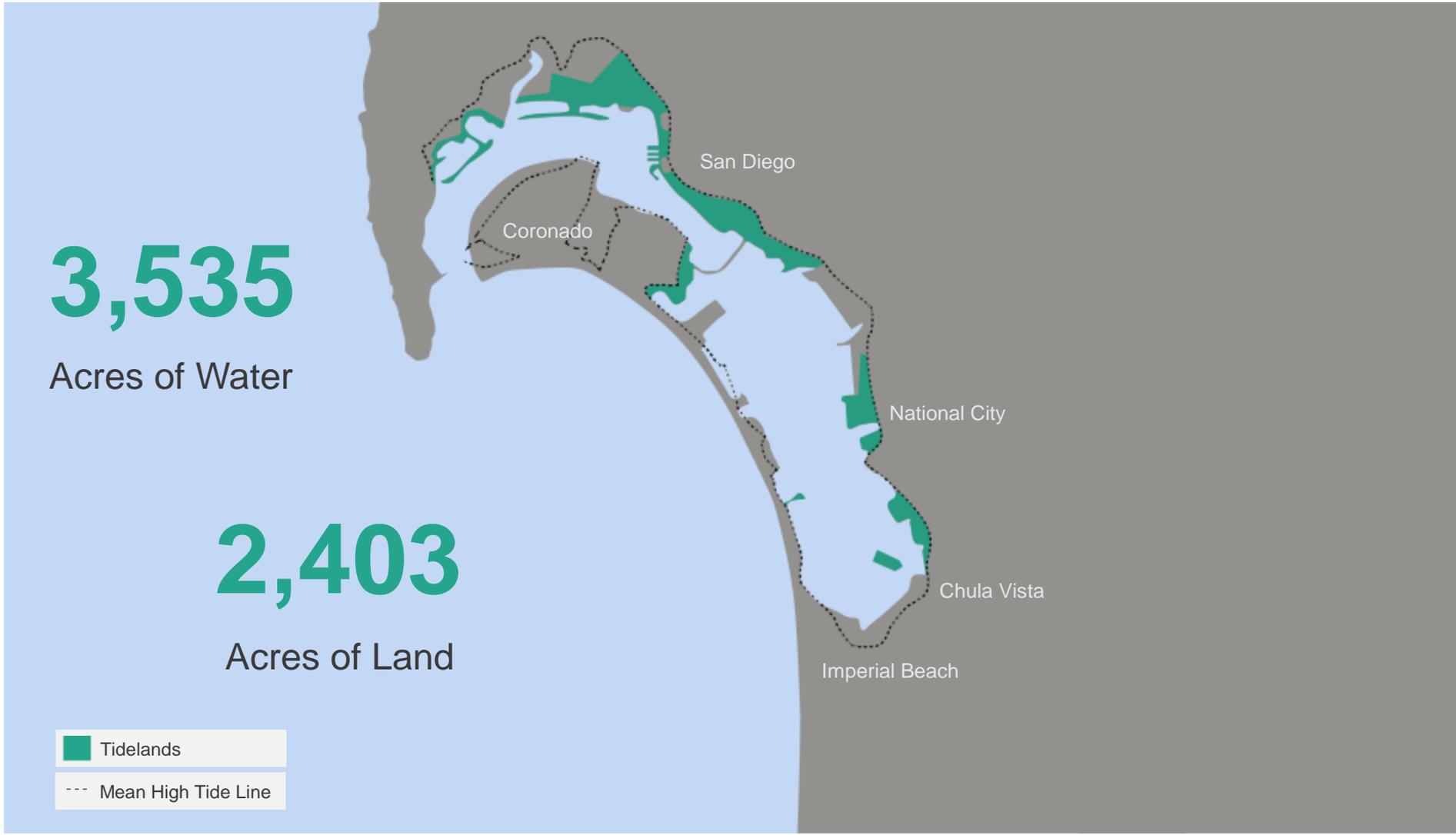
**AAPA  
2015  
Executive  
Management  
Conference  
May 7, 2015**

# Agenda

- About the Port of San Diego
- Technology Environment
- Cyber Security
- Automation for Maritime
- Technology Strategic Plan
- Technology Governance



# The Port's Jurisdiction



# Tidelands Trust Act

- Details Port's responsibilities
- Directs Port to manage San Diego Bay and the Tidelands
- Port must promote commerce, navigation, recreation and fisheries



# Governance

- Seven-member appointed board
- 526 employees
- \$144.6 million budget
- Funded through business ventures, not taxes.



# Board of Port Commissioners



**Dan Malcolm**  
Chairman



**Marshall Merrifield**  
Vice Chairman



**Dukie Valderrama**  
Secretary



**Garry Bonelli**



**Rafael Castellanos**

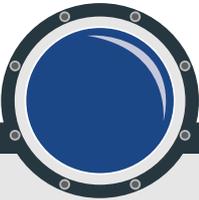


**Ann Moore**



**Bob Nelson**

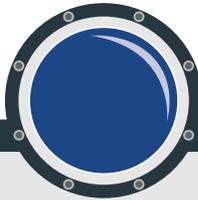
# What we do



## Harbor Police



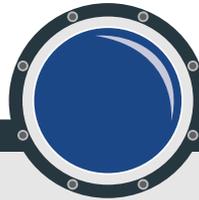
- Land/Water
- Firefighting
- Airport



## Maritime



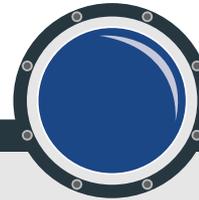
- Cruise
- Cargo
- Strategic Port



## Recreation



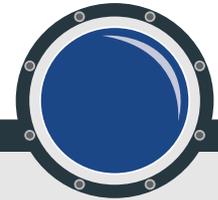
- 22 Parks
- 150 Acres
- Special Events



## Environmental and Land Use



- Land Use Planning
- Green Programs
- Restoration



## Real Estate Development



- 800 Leaseholds
- New Development

# Technology Environment



# Cyber Security

# Cyber Security

- Newly Dedicated IT Security Section
  - IT Security Supervisor
  - IT Security Analyst
- Adoption of NIST Cyber Security Standards for Critical Infrastructures
- Risk-based Management Approach
  - Audit Plan of Action & Milestones
  - Continuous Vulnerability Scanning
- Added Risk Mitigation through Cyber Insurance

**NIST**  
**National Institute of  
Standards and Technology**  
U.S. Department of Commerce



# Cyber Security

- Current Projects
  - Disaster Recovery Cloud Solution
  - Cyber Security Awareness Training (Basic, CJIS and PCI)
  - Firewall Hardening
  - Encrypted USB Mobile Devices
  - State of California Automated Threat Information Exchange (ATIX)



# Cyber Security

- Prospective Grant Projects
  - Enterprise Identity Management
  - PIV-I Smart Card (Logical/Physical Access, Digital Signature and Encryption)
  - Security Information And Event Management (SIEM)
  - Privileged Credential Management



# Cyber Security

- Area Maritime Sensor Program



# Maritime Automation

# Tariff & Billing rules

Pricing conditions and routines are set up in SAP to determine pricing and calculate the net value.

Per the tariff, full dockage is charged based on a rate determined by the length overall (LOA) of the vessel.

If the vessel's stay is less than 24 hours, the customer is charged a minimum of 24 hours. If the vessel stays more than 24 hours, the customer is charged per 6 hour increments.

In this example, the vessel's stay was 23 hours and 17 minutes and will therefore be charged for 24 hours.

RATES FOR FULL DOCKAGE					
Overall Length of Vessel in Meters (FT)			Overall Length of Vessel in Meters (FT)		
Over	But Not Over	Charge Per 24-Hour Day	Over	But Not Over	Charge Per 24-Hour Day
0 (0)	30 (98.4)	\$82	210 (689.0)	225 (738.2)	\$3,585
30 (98.4)	45 (147.6)	\$123	225 (738.2)	240 (787.4)	\$4,144
45 (147.6)	60 (196.8)	\$169	240 (787.4)	255 (836.6)	\$4,744
60 (196.8)	75 (246.1)	\$236	255 (836.6)	270 (885.8)	\$5,386
75 (246.1)	90 (295.3)	\$350	270 (885.8)	285 (935.0)	\$6,065
90 (295.3)	105 (344.5)	\$550	285 (935.0)	300 (984.2)	\$6,786
105 (344.5)	120 (393.7)	\$789	300 (984.2)	315 (1033.5)	\$7,253
120 (393.7)	135 (442.9)	\$1,066	315 (1033.5)	330 (1082.7)	\$8,348
135 (442.9)	150 (492.1)	\$1,386	330 (1082.7)	345 (1131.9)	\$9,188
150 (492.1)	165 (541.3)	\$1,746	345 (1131.9)	360 (1181.1)	\$10,070
165 (541.3)	180 (590.5)	\$2,145	360 (1181.1)	375 (1230.3)	\$10,990
180 (590.5)	195 (639.8)	\$2,585	375 (1230.3)	390 (1279.5)	\$11,953
195 (639.8)	210 (689.0)	\$3,065	390 (1279.5)		(1)

0575  
(A)

(1) Dockage charges for vessels 390 meters in overall length or over shall be \$33.00 per day for each lineal meter of overall length or fraction thereof in excess of 390 meters in addition to the above charge of \$11,953.

(2) Charges beyond the first twenty-four (24) hours shall be assessed in whole six-hour increments at twenty-five percent (25%) of the full rate for each subsequent six (6) hour period.

(3) Vessels on lay status, which is defined as a vessel waiting for a berth to discharge and/or load cargo, may be permitted to moor at idle terminal berths, upon the discretion of the Executive Director, when such berths are available. Lay status permission must be obtained by written application prior to the vessel's arrival. Dockage charges for vessels on lay status will be assessed at fifty-percent (50%) of the full dockage rate.

(4) Lay berthing of commercial barges at Port of San Diego facilities when space is available will be at 100% of the full dockage rate.

NOTE: Length in feet for reference only. Dockage charged by length in meters.

# Berth Request

A request to reserve a berth comes from a vessel's agent and the information is entered into SAP as a notification.

Notification: 400000703 ZB

Notific. Status: OSNO INTL

Ship Arrival Notification | Berth Request Details | Utilities | Wharfage Details | Partner Details

Vessel Name: JEAN ANNE  Not to be reported

Expected Arrival Date: 01/05/2015 Expected Arrival Time: 10:51:13

Expected Departure Date: 01/06/2015 Expected Departure Time: 00:00:00

Berth Requested: BU 1000/00000005/00000053 Berth 24-2

	Country	Port Name
Last Port of Call (Vessel)	US USA	HILO
Next Port of Call (Vessel)	US USA	HONOLULU
Origin Country (Cargo)		
Destination Country (Cargo)		

Type of Vessel: CARGO VESSEL

Sub-Type Of vessel: RORO

Vessel Classification: RORO

Actual Arrival Date: Actual Arrival Time: 00:00:00

Actual Departure Date: Actual Departure Time: 00:00:00

Actual Berth:

Email ID for Contractor:

Total Hours: 0.00 Reference Text:

No. Of Days: 1 Reference Text:

# Supervisor review & approval

Notification **400000703** ZB

Notific. Status OSNO **APPR**

Ship Arrival Notification | Berth Request Details | Utilities | Wharfage Details | Partner Details

Vessel Name **JEAN ANNE**  Not to be reported

Expected Arrival Date **01/05/2015** Expected Arrival Time **10:51:13**

Expected Departure Date **01/06/2015** Expected Departure Time **00:00:00**

Berth Requested **BU 1000/00000005/00000053** Berth 24-2

	Country	Port Name
Last Port of Call (Vessel)	US USA	HILO
Next Port of Call (Vessel)	US USA	HONOLULU
Origin Country (Cargo)		
Destination Country (Cargo)		

The information is displayed on the SDMIS website as the Commercial Vessel Schedule

Date: Apr 15, 2015

Status	Vessel Name	Arrival	Time	Departure	Time	Last Port	Ctry	Next Port	Ctry	Berth	Movement	Cargo Type	Agent	Stevedore	Flag
In Port															
In Port	TRIANON	03/25/2015	18:50:00	03/25/2015	unkn	PORT HUENEME	US	ULSAN	KR	Berth 24-10, Sweetwater	INBOUND	AUTOMOBILES	PSH	PASHA	NO
Sailed															
Sailed	CSAV RIO GRANDE	01/04/2015	06:30:00	01/05/2015	13:00:00	TACOMA	US	LÁZARO CÁRDENAS	MX	Berth 24-5, Container	INBOUND	AUTOMOBILES	PSH	PASHA	LR
To Arrive															
To Arrive	JEAN ANNE	01/05/2015	10:51:13	01/06/2015	unkn	HILO	US	HONOLULU	US	Berth 24-2					US
To Arrive	CROWN PRINCESS	01/29/2015	15:00:25	02/11/2015	16:00:00	LOS ANGELES	US	ENSENADA	MX	Berth B-4			PSH	METRO	BH

# Dock & Sail updates

Wharfinger updates SAP when the vessel docks .....

Dialog box titled "Dock" showing input fields for Date docked (01/05/2015), Time docked (16:38:00), Actual Berth (BU 1000/00000005/00000053), Draft Forward (Meters(M)), Draft After (Meters(M)), Docking Pilot, Wharfinger, and Docking Notes. Buttons for OK and Cancel are visible at the bottom.



..... and when the vessel sails

Dialog box titled "Sail" showing input fields for Date Sailed (01/06/2015), Time Sailed (16:17:00), Draft Out Forward (Meters(M)), Draft Out After (Meters(M)), Sailing Pilot, Sailing Wharfinger, and Sailing Notes. Buttons for OK and Cancel are visible at the bottom.



# Sales Order

EMOS Sales Order **915** Net value **39,560.55** USD

Sold-To Party **228** Pasha Group, The / 1309 Bay Marina Drive / National City CA 91950

Ship-To Party **228** Pasha Group, The / 1309 Bay Marina Drive / National City CA 91950

PO Number PO date

Sales Item overview Item detail Ordering party Procurement Shipping Reason for rejection

Req. deliv.date **D 01/05/2015** Deliver.Plant

Contract start Contract end

Complete div. Total Weight **0 KG**

Delivery block Volume **0.000**

Billing block **02 Compl Confirm Missng** Pricing date **01/07/2015**

Payment card Exp.date

Card Verif.Code

Payment terms **NT45** Net due in 45 days Incoterms

All items

Item	Material	Qt	Order	Order Quantity	Un	Description	PO Details	Net value
100	<b>D0575</b>	1005	BERTH 24-2	176.470	M	FULLDOCK		1,619.47
200	W0666	1005	BERTH 24-2	91	EA	WHARFHITRD		1,086.23
300	W0666	1005	BERTH 24-2	243.670	T	WHARFHITRD		3,320.67
400	W0666	1005	BERTH 24-2	1	EA	WHARFHITRD		143.52
500	W0666	1005	BERTH 24-2	0.495	T	WHARFHITRD		6.61
600	W0666	1005	BERTH 24-2	38.227	T	WHARFHITRD		510.85
700	W0666	1005	BERTH 24-2	1	EA	WHARFHITRD		16.35
800	W0666	1005	BERTH 24-2	6	EA	WHARFHITRD		339.75
900	W0666	1005	BERTH 24-2	8	EA	WHARFHITRD		906.00
1000	W0666	1005	BERTH 24-2	1,546	EA	WHARFHITRD		18,453.91
1100	W0666	1005	BERTH 24-2	314.664	T	WHARFHITRD		4,288.17

Repairs

# Billing Approval

The Sales Order goes through automated workflow and is reviewed/approved by the Marine Terminal Supervisors.

Once approved, it is ready for billing and the customer is invoiced.



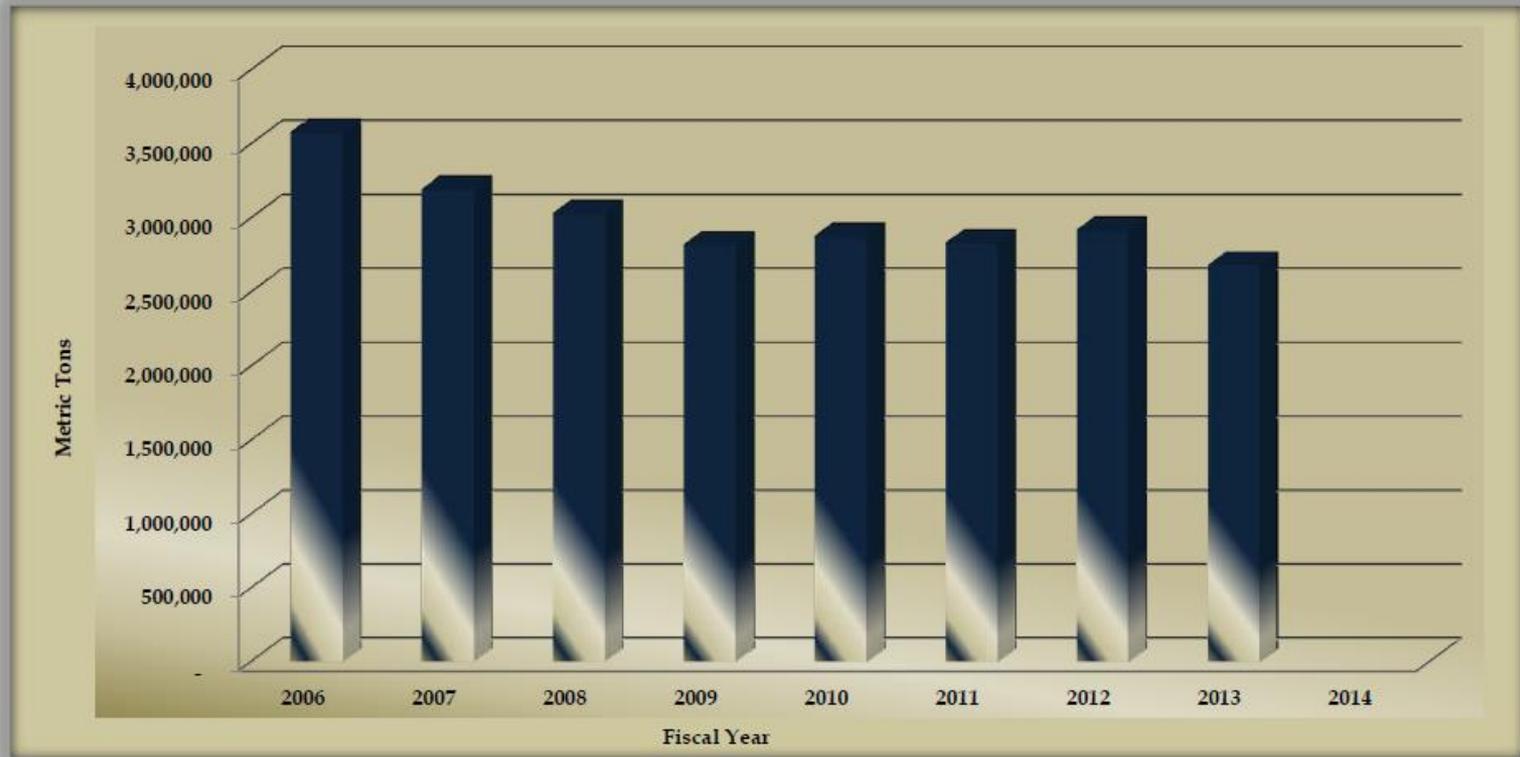
**SAN DIEGO UNIFIED PORT DISTRICT**  
 FINANCE DEPARTMENT  
 P.O. BOX 120488  
 SAN DIEGO, CA 92112-0488

PHONE: (619) 686-6258  
 FAX: (619) 686-6279  
 WEB: [www.portofsandiego.org](http://www.portofsandiego.org)

INVOICE NO: 90001428						
TRIP REF:	400000703	INVOICE DATE:	02/20/2015			
VESSEL:	JEAN ANNE	DUE DATE:	04/06/2015			
BERTH:	Berth 24-2					
SERVICE DATE:	01/05/2015 16:38:00 - 01/06/2015 16:17:00					
CUSTOMER:	Pasha Group, The dba Pasha Automotive Services 1309 Bay Marina Drive National City CA 91950			CUSTOMER NO:	228	
				REFERENCE:		
ITEM	TARIFF	SERVICE AND DESCRIPTION	QTY	MEAS	RATE	AMOUNT
10	0575	Full Dockage	4.000	6 HRS	536.25	1,619.47
20	0666	Hawaiian Trade (A) VEH, AUTO, PLEASURE, PAX	91.000	EA	15.81	1,086.23
30	0666	Hawaiian Trade (B) COMM, Vehioles, Trailers	243.670	T	18.05	3,320.67
40	0666	Hawaiian Trade (D-1) ENCL 48' Trailer--Loaded	1.000	EA	190.09	143.52
50	0666	Hawaiian Trade (F) REC & UTL Trailers	0.495	T	17.7	6.61
60	0666	Hawaiian Trade (G) Cargo N.O.S.	38.227	T	17.7	510.85
70	0666	Hawaiian Trade (H) Empty Trailers	1.000	EA	21.65	16.35
80	0666	Hawaiian Trade (M-1) CRG NOS (0 - 7 Meters)	6.000	EA	75	339.75
90	0666	Hawaiian Trade (M-3) CRG NOS (Over 9 Meters)	8.000	EA	150	906.00
100	0666	Hawaiian Trade (A) VEH, AUTO, PLEASURE, PAX	1,546.000	EA	15.81	18,453.91
110	0666	Hawaiian Trade (B) COMM, Vehioles, Trailers	314.664	T	18.05	4,288.17
120	0666	Hawaiian Trade (C) MACH, FARM, CONST, Other	231.777	T	17.7	3,097.35
130	0666	Hawaiian Trade (D-1) ENCL 48' Trailer--Loaded	6.000	EA	190.09	861.11
140	0666	Hawaiian Trade (F) REC & UTL Trailers	3.261	T	17.7	43.58
150	0666	Hawaiian Trade (G) Cargo N.O.S.	129.750	T	17.7	1,733.92
160	0666	Hawaiian Trade (H) Empty Trailers	15.000	EA	21.65	245.19
170	0666	Hawaiian Trade (M-1) CRG NOS (0 - 7 Meters)	3.000	EA	75	169.57

# Reports & Dashboards

## Total Annual Tonnage



Fiscal Year	2006	2007	2008	2009	2010	2011	2012	2013	2014
Total	3,580,967	3,192,885	3,030,929	2,819,472	2,877,298	2,830,463	2,920,337	2,682,661	-
% Change	-	-10.8%	-5.1%	-7.0%	2.1%	-1.6%	3.2%	-8.1%	-100.0%

# Reports & Dashboards

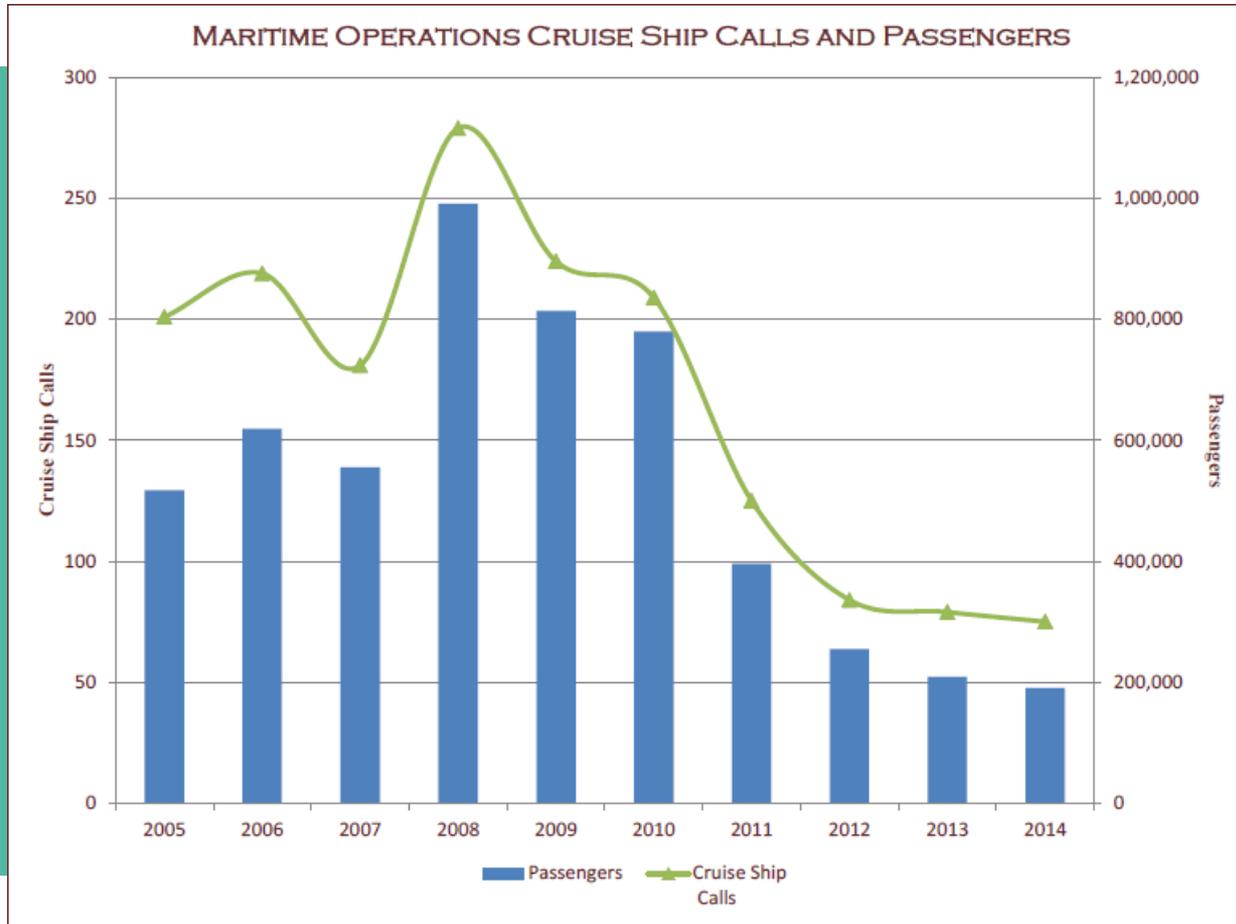
## Cargo Volumes by Type

(EXPRESSED IN METRIC TONS)

Cargo	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Cement	651,488	759,942	547,708	227,423	160,590	127,679	122,233	115,962	88,618	121,218
Sand	390,331	474,748	378,422	215,501	114,537	-	-	-	-	-
Fertilizer	163,284	85,406	69,263	77,470	46,849	54,478	41,494	50,917	36,503	41,304
Soda Ash, Potash, Sodium Sulf.	-	-	5,184	-	-	-	-	14,928	10,897	51,570
Lumber	151,407	142,127	116,958	134,732	80,146	63,994	72,645	77,188	65,344	17,701
Fresh Fruit	51,848	59,866	45,295	29,870	-	-	-	-	-	-
Newsprint	34,410	29,922	27,628	2,283	-	-	-	-	-	-
Petroleum	126,721	137,900	133,086	178,078	153,589	162,225	111,078	75,806	71,822	74,003
Autos	352,147	458,900	543,715	664,870	394,569	401,375	379,821	468,786	545,001	556,954
Container	639,476	670,246	615,208	618,830	604,841	580,822	617,289	640,586	621,921	660,586
Steel Coils	8,544	335	3,831	31,358	20,400	5,546	6,732	9,849	43	-
Windmills	-	41,819	93,262	63,191	94,101	25,106	10,763	68,541	15,360	3,942
Other	118,728	160,446	139,239	162,002	121,384	150,015	129,487	172,800	219,577	140,966
<b>Total Cargo</b>	<b>2,688,384</b>	<b>3,021,657</b>	<b>2,718,799</b>	<b>2,405,608</b>	<b>1,791,006</b>	<b>1,571,240</b>	<b>1,491,542</b>	<b>1,695,363</b>	<b>1,675,086</b>	<b>1,668,244</b>
<b>Minimum Annual Guarantee (MAG)</b>	<b>613,875</b>	<b>559,310</b>	<b>474,086</b>	<b>625,322</b>	<b>1,028,467</b>	<b>1,306,058</b>	<b>1,338,920</b>	<b>1,224,974</b>	<b>1,007,575</b>	<b>996,412</b>
<b>Total Cargo with MAG</b>	<b>3,302,259</b>	<b>3,580,967</b>	<b>3,192,885</b>	<b>3,030,930</b>	<b>2,819,473</b>	<b>2,877,298</b>	<b>2,830,462</b>	<b>2,920,337</b>	<b>2,682,661</b>	<b>2,664,656</b>

# Reports & Dashboards

## Cruise Ship Calls and Passengers



# Technology Strategic Plan

# Technology Strategic Plan

## 5 year Technology Strategic Plan

- Developed 2012
- Currently in Year 3
- Now 7 year plan

# Technology Strategic Plan 2013-2019

## YEAR 1 FY12/13

Board Room Equipment Refresh  
Dash Board  
Data Center Study  
ECMS, RMS, Imaging, AW, Email  
MS Windows 7 Upgrade  
Permitting System Parks / Events  
Refresh Desk/Laptops Older than 5 Years  
Refresh Server Older than 5 Years  
Replace GroupWise

## YEAR 4 FY15/16

BITS Staff Resources (ECMS, WEB, GIS)  
Computer Aided Dispatched System (CAD)  
CRM Application  
Disaster Recovery Mirrored Site  
ECMS Phase III – Records Management  
Events Scheduling Application  
GIS Applications  
Lease Negotiation & Real Estate  
Refresh Desk/Laptops Older than 5 Years  
Refresh Server Older than 5 Years  
Enterprise Budget Prep & Mgt. Requirements  
Refresh Mobile Terminals  
Scanner Equipment & Backfile Updates

## YEAR 2 FY 13/14

Automated Board Agenda Application  
BITS Staff Resources (ECMS, WEB, GIS)  
Board Room Equipment Refresh  
ECMS, RMS, Imaging, AW, Email  
E-Government Website / Portal  
MOIS Replacement  
Refresh Desk/Laptops Older than 5 Years

## YEAR 5 FY 16/17

BITS Staff Resources (ECMS, WEB, GIS)  
CCTV Security Strategy  
Disaster Recovery Mirrored Site  
Enterprise Benefits Management System  
Grants Management Application  
Refresh Desk/Laptops Older than 5 Years  
Refresh Server Older than 5 Years  
Modify SAP for Year End Process  
Enterprise Reporting & Warehouse Management  
Modify SAP Payroll Process

## YEAR 7 FY 18/19

BITS Staff Resources (ECMS, WEB, GIS)  
Contract Management System  
Enterprise Asset Management System  
Learning Management System  
Performance Evaluation Application  
Refresh Desk/Laptops Older than 5 Years  
Refresh Server Older than 5 Years  
SAP Reporting  
SAP Treasury Function Integration

## YEAR 3 FY14/15

BITS Staff Resources (ECMS, WEB, GIS)  
CRM – Requirements Gathering  
Disaster Recovery Mirrored Site  
ECMS Phase II – Digital Asset Management  
E-Gov Go-Live Phase – NEW Internet Site  
E-Gov – eDiscovery & Public Records Request  
EPM – Project Reporting and Task Management  
Park Permitting System  
Refresh Desk/Laptops Older than 5 Years  
Lease Negotiation & Real Estate Requirements  
SAP AP Electronic Approval  
Enterprise Budget Management (BETA)  
Enterprise Reporting & Warehouse  
IT Security Functions  
Planned Maintenance Enhancements  
Audit Management Software

## YEAR 6 FY 17/18

BITS Staff Resources (ECMS, WEB, GIS)  
ERP HR E-Personnel Files  
Leave of Absence Application  
Refresh Desk/Laptops Older than 5 Years  
Refresh Server Older than 5 Years  
SAP Reporting

# What is Technology Governance?

- Process to vet and prioritize technology initiatives
- Why
  - ✓ Assures that the investments in IT generate business value
  - ✓ Mitigates the risks that are associated with IT
  - ✓ Improves project success
  - ✓ Compliance Issues addressed proactively instead of reactively
- **Members are Directors and Executive Leadership**

# TGF Key Rules

- Oversee IT strategy and policy decisions
- Base information technology decisions on the Technology Strategic Plan (TSP)
- Position BITS as a strategic department that resolves business issues with information technology
- Ensure the TSP remains up-to-date, relevant, and in alignment with the Ports technology and strategic goals

# TGF Process

Step 1 - Submission



Step 2 – Request Review



Step 3 – Business  
Justification



Step 4 – TGF Formal  
Review

# Criteria for Prioritization

Criteria	Score			
	5	3	1	0
Supports Enterprise Arch	Enterprise	Department	Section	No
Improves Efficiencies	Enterprise	Department	Section	No
Improves Customer Service	Transaction	Interactive	Informational	No
Supports Legal Mandates	Required	Facilitates	Supports	No
Cost Benefit Potential	>\$2.0M	\$1.0 - \$1.9M	\$250k - \$900k	<250k
Capacity BITS	FY+1	FY+2	FY+3	FY+4
Capacity Department	FY+1	FY+2	FY+3	FY+4
Budget	FY+1	FY+2	FY+3	FY+4
Project Alignment	5P	3P	1P	No

# Questions?

