STEADY EXPANSION

Sources: CLIA, PSA, B&A, 2008

SINCE 1990 WORLDWIDE PASSENGER LEVELS HAVE TRIPLED
THE ROLE OF OPERATIONS IN THE CRUISE CYCLE

- Number of PAXS
- Processing Capacity
- Net Revenues
- Costs of Terminal
- Cost of Operations
WHY OPERATIONS ARE CRITICAL

• MOST PORTS WANT TO PAY THE CAPITAL PROGRAM FROM EXCESS REVENUES
• LARGER TERMINALS MEAN LARGER CAPITAL FUNDS
• REVENUES ARE CONTROLLED BY VERY COMPETITIVE TARIFFS
• EXCESS REVENUES ARE A PREMIUM
SIZE OF SHIPS
## EVOLUTION OF CRUISE SHIPS

<table>
<thead>
<tr>
<th>Period</th>
<th>Length</th>
<th>Draft</th>
<th>PAX</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
<td>500 ft.</td>
<td>36 ft.</td>
<td>500</td>
</tr>
<tr>
<td>1970</td>
<td>705 ft.</td>
<td>32 ft.</td>
<td>650</td>
</tr>
<tr>
<td>1980</td>
<td>803 ft.</td>
<td>29.5 ft.</td>
<td>1,500</td>
</tr>
<tr>
<td>1990</td>
<td>902 ft.</td>
<td>26.2 ft.</td>
<td>2,600</td>
</tr>
<tr>
<td>1997</td>
<td>965 ft.</td>
<td>26.2 ft.</td>
<td>3,600</td>
</tr>
<tr>
<td>2000</td>
<td>1,000 ft.</td>
<td>29.5 ft.</td>
<td>3,000</td>
</tr>
<tr>
<td>2006</td>
<td>1,000 ft.</td>
<td>29.5 ft.</td>
<td>4,000</td>
</tr>
<tr>
<td>Next Generation</td>
<td>1,100 – 1,400 ft.</td>
<td>32 - 36 ft.</td>
<td>5,000+</td>
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</tbody>
</table>
On average, cruise ships are increasing 500 passengers every three years.
MEGA SHIPS
PROGRESSION OF TERMINAL SIZE (FT²)

Number of passengers:
- 1,500
- 2,500
- 3,600
- 6,000

Square feet:
- 50,000
- 100,000
- 150,000
- 200,000
- 250,000
REALITY

• DURING THE PAST FIVE YEARS, THE INDUSTRY HAS BEEN ABLE TO ABSORB GROWTH BY REDEVELOPING OLD TERMINALS
  • NOT MANY OF THESE EXISTS ANY MORE
• DURING THE NEXT TEN YEARS, EITHER
  • MORE ALTERNATE CITIES WILL BE NEEDED
  • GROWTH WILL BE NEEDED IN THE TRADITIONAL PORTS
• HOW CAN PORTS GROW?
  • IN A FINANCIALLY FEASIBLE WAY
GROWTH ISSUES

• WHILE NEW PORTS HAVE BEEN ABLE TO CHEAPLY DEVELOP A TERMINAL BY USING OLD WATERFRONT WAREHOUSES – ALL NEW REVENUES

• THE LEGACY PORTS ARE STRUGGLING WITH MASSIVE CAPITAL REDEVELOPMENT – BUT NOT NECESSARILY NEW BUSINESS OR REVENUES
THE EVOLUTION OF THE CRUISE TERMINAL

- TEMPORARY FACILITY
- CONVERSION OF EXISTING BUILDING
- NEW FACILITY
- JOINT DEVELOPMENT
POLICY ISSUES

- IS THE PORT HAVE MORE THAN ONE TERMINAL?
- IS THE PORT HAVE MORE THAN ONE USER?
- WHO PAYS FOR THE IMPROVEMENTS?
- HOW IS QUALITY IMPROVED?
- HOW ARE COSTS CONTROLLED?
- HOW DO YOU SEPARATE FUNCTIONS?
NET INCOME PER PASSENGER

CARNIVAL  RCI


$0 $50 $100 $150 $200 $250 $300 $350 $400 $450 $500
TERMINAL INVESTMENT

- DEVELOP
- CONSTRUCT
- OPERATE
- STEVEDORE
- FINANCE
DEVELOPMENT VS. OPERATIONS

- DISTINCT DIFFERENCE
- SOME PORTS HAVE THOUGHT THAT AN OPERATOR WILL INVEST THE MONEY TO BUILD THE TERMINAL
- OPERATORS WORK ON A FEE BASIS WITH LIMITED CAPITAL INVESTMENT
- US PORTS HAVE ACCESS TO BETTER FINANCING TERMS FOR CAPITAL PROGRAMS
RELATIVE COSTS OF PORT OPERATIONS

- Stevedore
- Port
- Agent
- Tugs
OPERATIONAL MODEL - STRATEGIES

• MAXIMIZE RETURN
• MAINTAIN COMPETITIVE ENVIRONMENT
• MEET PASSENGER SERVICE METRICS
METRICS

• NEWER TERMINALS IN THE FAR EAST ARE DEVELOPING HIGHLY COMPREHENSIVE MEASURABLE METRICS INCLUDING:
  • VOLUMES
  • TIME TO COMPLETE EMBARK / DEBARK
  • PASSENGER TIME IN TERMINAL
  • TIME IN QUEUES –
    • SECURITY
    • BOARDING
  • PASSENGER SATISFACTION
THERE IS NO UNIFORM STANDARD
TERMINAL OPERATION MODELS

- PORT OPERATED MODEL
- PRIVATE TERMINAL OPERATOR MODEL
- MIXED MODEL
  - PRIVATIZE COMPONENTS
    - PARKING
    - HOUSEKEEPING
    - MAINTENANCE
    - SECURITY
US - CANADA - TERMINAL OPERATION MODELS

- TERMINAL OPERATOR
- MIXED
- PORT OPERATOR
PORT OPERATED MODEL

- Cruise Lines
- Port
- Operator

- MAINTENANCE
- GROUND SECURITY
- MARKETING

- HOUSEKEEPING
- OPERATIONS
- SCHEDULING

- PARKING
- SHIP SECURITY
- SECONDARY USES

- STEVEDORES
- PILOTS
- LINE HANDLING
TERMINAL OPERATIONS COMPONENTS

- MARKETING
- SHIP SCHEDULING
- MAINTENANCE
- HOUSEKEEPING
- TERMINAL SECURITY
- SHIP SECURITY
- COORDINATION OF OPERATIONS
- PARKING OPERATIONS
- ACCOUNTING
- SECONDARY USES
MARKETING

• MOST PORTS WANT TO RETAIN THAT ELEMENT
  • SOMETIMES A JOINT EFFORT

• POTENTIAL CONFLICT IF OUTSIDE OPERATORS CONTROL MORE THAN ONE PORT
SHIP SCHEDULING

• IN MOST PORTS WITH ONE OR TWO BERTHS, THIS IS RELATIVELY SIMPLE TASK
• IN LARGER PORTS CAN BECOME MORE COMPLICATED
MAINTENANCE

• HAVE TO SEGREGATE ROUTINE FROM MAJOR MAINTENANCE
• ROUTINE MAINTENANCE CAN BE PLANNED FOR IN AN ANNUAL BUDGET
• MOST TERMINAL OPERATION CONTRACT LEAVES OUT MAJOR MAINTENANCE TO LANDLORD (PORT)
• CAN STREAMLINE PURCHASING IF DONE THRU A PRIVATE OPERATOR
HOUSEKEEPING

• A GOOD FUNCTION FOR THE OPERATOR, BUT

• EASILY PRIVATIZED SEPARATELY
SECURITY

• TERMINAL SECURITY
  • PERIMETER SECURITY USUALLY PROVIDED BY LANDLORD (PORT) OR,
  • LOCAL LAW ENFORCEMENT AGENCY

• SHIP SECURITY
  • MIXED REVIEWS
  • SOME PORTS IT IS RELEGATED TO THE CRUISE LINE TO OPERATE AND PAY
  • SOME PORTS PROVIDE THE SERVICE
    • SOMETIMES IT IS PART OF THE TARIFF
    • SOMETIMES IT IS CHARGED SEPARATELY
COORDINATION OF OPERATIONS

• MAKE SURE TERMINAL IS SET UP FOR THE DAY
• PORT OPERATIONS
• GROUND TRANSPORTATION
• FEES ON USERS
• CONCESSIONS
SECONDARY USES

- RETAIL
- COMPATIBLE USES
- SECONDARY USES OF TERMINAL FACILITIES
  - BETWEEN CRUISES
  - NIGHTTIME
  - SEASONAL
- COMBINATION ISES
- OPEN SPACE
TRADITIONAL PORT OPERATIONS MODEL

- Cruise Lines
- Port
- Operator
  - Maintenance
  - Housekeeping
  - Parking
  - Stevedores
- GROUND SECURITY
- OPERATIONS
- Ship Security
- Pilots
- Line Handling
- Marketing
- Scheduling
- Secondary Uses
TYPICAL TERMINAL OPERATIONS MODEL

- Cruise Lines
- Port
- Operator

- Maintenance
- Ground Security
- Marketing
- Scheduling
- Secondary Uses
- Line Handling

- Housekeeping
- Operations
- Pilots

- Parking
- Ship Security

- Stevedores
WHAT MODEL WORKS THE BEST?

• SUBJECT TO MANY FACTORS
  • TOTAL NUMBER OF PASSENGERS
  • AGE OF FACILITIES
  • EFFICIENCY OF PIERS
  • TRADITIONAL LABOR PRACTICES

• A COMPARISON OF SEVERAL CASE STUDIES OFFERS CLUES
OPERATIONAL COSTS ($ PER PASSENGER) before debt, depreciation, taxes

- TERMINAL OPERATOR
- PORT OPERATOR
- MIXED

Comparison of operational costs across different cases:
- Case 1: Terminal Operator
- Case 2: Terminal Operator
- Case 3: Mixed
- Case 4: Port Operator
- Case 5: Port Operator
- Case 6: Mixed

Costs range from $0.00 to $16.00 per passenger.
EXPENSES VS. COSTS

![Graph showing the relationship between expenses and passenger satisfaction]
HOW TO BE COMPETITIVE

• SEPARATE STEVEDORING FROM TERMINAL OPERATIONS
  • ALLOW LINES TO COMPETITIVELY PRICE DIFFERENT SERVICES

• PROVIDE FOR COMPETITION FOR SERVICES
  • PORT CONTROLLED
    • TARIFFS
    • USAGE
  • CRUISE LINE CONTROLLED
    • STEVEDORING
    • OTHERS

LINK COSTS TO LEVEL OF SERVICE
CONCLUSIONS

• PORTS ARE EXPLORING MANY OPTIONS
• OTHER THAN PORT OPERATED FACILITIES, THERE IS NO PREDOMINANT OPERATIONS MODEL
• TERMINALS HAVE TO BE OPERATED:
  • EFFICIENTLY
  • MAXIMIZE REVENUES
  • LOW COSTS
  • CONTRIBUTING REVENUES TO THE BOTTOM LINE