Role of IT in Port Management and Operations

2018 MARINE TERMINAL MANAGEMENT TRAINING PROGRAM
Introduction: Chris Millar

1996-2002: Built long-haul Fiber Optic Network for companies like Qwest, Worldcom, IXC/Broadwing and MCI

2002-Present: IT projects focused in Public Safety

Areas of Experience:
- Large and Small business support
- Project Budgeting, Design, and Management
- Department organization and structure
Introduction: Chris Millar

Port Projects include:
  o EOCs (Emergency Operations Centers)
  o Camera and Access Control systems
  o PSIM systems (Physical Security Information Management)
  o Large network build-outs, including Fiber Optic and Wireless networks
  o General IT systems and management
What does IT do?
The Goal of IT is Productivity

• Keep technology systems running (Operations)

• Propose and execute business transforming projects (Organizational Initiatives)
The Responsibilities of IT

• Keep staff working
• Keep the business operational
• Find new efficiencies
• Spot new business opportunities
• Protect the business
But what does IT really do?

<table>
<thead>
<tr>
<th>Desktop Support</th>
<th>Billing Systems</th>
<th>Video Conferencing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email</td>
<td>Payroll Systems</td>
<td>Lighting automation systems</td>
</tr>
<tr>
<td>Website Hosting</td>
<td>GIS/Mapping</td>
<td>Ship-to-Shore power accounting</td>
</tr>
<tr>
<td>SharePoint</td>
<td>AIS</td>
<td>Mass notification</td>
</tr>
<tr>
<td>Desk Phones</td>
<td>Radar</td>
<td>IT System Monitoring &amp; Maintenance</td>
</tr>
<tr>
<td>Marketing database</td>
<td>Camera Systems</td>
<td>Board/Council meeting applications</td>
</tr>
<tr>
<td>Mobile Phones</td>
<td>Access Control Systems</td>
<td>Visitor/Lobby check-in systems</td>
</tr>
<tr>
<td>iPads</td>
<td>Incident Management</td>
<td>Database management</td>
</tr>
<tr>
<td>Web Conferencing</td>
<td>Lease tracking applications</td>
<td>Asset Tracking</td>
</tr>
<tr>
<td>Wireless Networking</td>
<td>Backups &amp; Disaster Recovery</td>
<td>Budgeting</td>
</tr>
<tr>
<td>VPN/Remote Working</td>
<td>Document management</td>
<td>Management Reporting</td>
</tr>
<tr>
<td>Ticketing Systems</td>
<td>A/V Presentation Systems</td>
<td>Training</td>
</tr>
<tr>
<td>Accounting Systems</td>
<td>HVAC &amp; Building Control Systems</td>
<td>Cyber Security</td>
</tr>
</tbody>
</table>
It’s a changed world

- Client in 2003:
  “We can’t get to the internet, could you come out this week?”

- Client in 2018:
  “OUR INTERNET IS DOWN!!!!!!”
Biggest Changes in IT

• 24x7x365 operations

• Job specialization
What can IT do NEW for me?
<table>
<thead>
<tr>
<th>What is technology good at?</th>
<th>What is technology less good at?</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Automating redundant task</td>
<td>• Automating complex decision making</td>
</tr>
<tr>
<td>• Enforcing standardized processes &amp; compliance</td>
<td>• Enforcing human behavior</td>
</tr>
<tr>
<td>• Processing standardized data</td>
<td>• Processing non-standardized data</td>
</tr>
</tbody>
</table>
Popular Port Technology Initiatives

• Business Automation & Workflows
  • Merging Operational and Accounting workflows
  • Automating support request systems including; Maintenance and IT ticketing

• Disaster Recovery and Business Continuity

• Public Outreach; including public information systems, marketing, and websites.
Popular Port Technology Initiatives

• Security & Awareness
  • Camera, Access control, and security alert automations
  • EOCs (Emergency Operations Centers)
  • Incident management and SOP (Standard Operating Procedure) automation and integration
  • Common domain awareness systems (including PSIMs), which merge and automate security data and functions (Incident management, Camera systems, GIS, Mass Notification)

• Cyber Security
What can I do for IT?
Give us all the details, please (pleas)

• What is my experience now?
• What are we trying to accomplish?
• What is the big picture?

Even if you know the solution, starting out with these items will lead to better results
Build or Buy?
Build or Buy: Application Development

- Cost for Microsoft to develop Windows 10:
  - $Billions++

- Retail price for Microsoft Windows 10:
  - $199

*Off-the-shelf software for the Win*
Build or Buy: Staff or Outsource

• How many hours of resources will I need for this specialty?
• Is this skill set readily available in the marketplace or current staff?
• How much will training cost to develop this specialty?
• How much will training cost to maintain this specialty?
• Do I need high availability for this specialty (24x7x365)?
• Is this skillset central to my business and planning?
Build or Buy: Staff or Outsource

- In-house Staffing Cost Example, “Application Specialist”:
  - Staff Raw Salary (5 day work week): $100k
  - Staff position cost fully loaded: $135k
  - Vacation Days 15
  - Sick Days 5
  - Holidays 5
  - Staff position availability
    - Days in a year: 365
    - Work days in a year: 261
    - Staff work days in a year: 236
    - Percentage of staff availability during work days: 90%
    - Percentage of staff availability during all days: 65%
Build or Buy: Staff or Outsource

Build or Buy Questions:
• What are our requirements to support this application (24x7x365, response time)?
• What is our in-house staffing cost
• What is our Outsource staffing cost
• What is our cost to manage each type of staffing?
How should I engage for my project?

If you put ten engineers in a room, you will get eleven answers.

- Chris Millar, engineer
Initiating a project

Involve IT as early as possible:

• There may be other departments already doing something similar and your project may be an easy add-on.

• OR your project may involve significant infrastructure changes, which may affect your goals.

Always include IT management

• Even if you know the application specialist for your project, management may know of additional initiatives that could affect your project.
“Change before you have to.”

– Jack Welch

Chris Millar
President, Datastew LLC
310-853-3255
chris@datastew.com