

Marine Terminal Operating Systems

Role of the TOS in Terminal Operations

September 23, 2009



Alliance of the Ports of Canada, the Caribbean, Latin America and the United States

Seaports
Deliver
Prosperity

American Association of Port Authorities
703.684.5700 • www.aapa-ports.org

What's in a TOS

- *Operations*
 - Planning
 - Execution Automation
 - Optimization (work in progress)
- *Communications*
 - Regulatory Compliance
 - Data Exchange with Carriers, Railroads, etc.
 - WWW access for Customers, Partners
- *Interface to External Systems*
 - Position Detection, Optical Character Recognition, Gate Complex
 - Reporting: Executive and Operating Dashboards
 - Finance & Billing



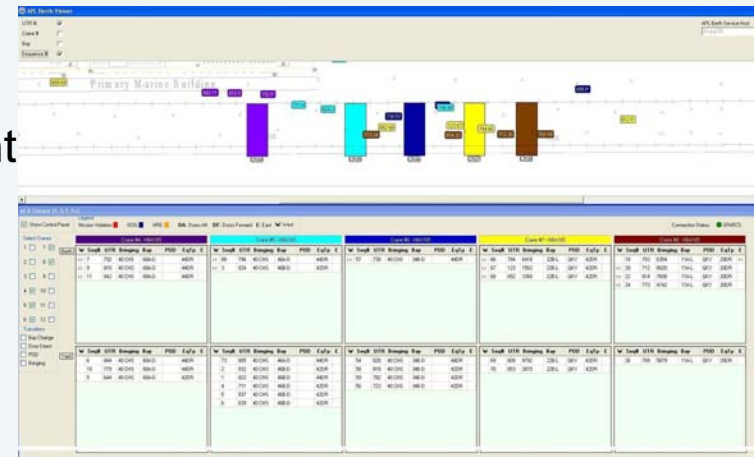
Market Differentiator or Necessity?

- *World Class Operations need World Class Systems*

- Ability to attract customers
- Cost and Performance Guarantees
- Operating Flexibility, Customer Integration
- Competitive Necessity

- *Key to Operational Excellence*

- Nerve Center for Terminal Management
- Integration Center – Data, Process and Technology
- Efficiency, Reliability, Consistency
- Profitability & Cost Control



Characteristics of World Class TOS

- *Focus on Integrated Operations*

- Optimize Overall Productivity
- Prevent Revenue Leakage
- Resource visibility and utilization
- Quality of Service



- *Scaleable*

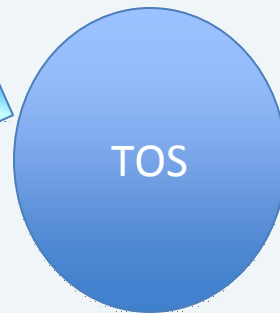
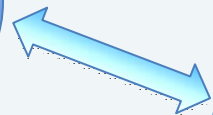
- Able to deal with rapidly increasing (or decreasing) volumes
- Easy to maintain, low carrying cost (TCO)
 - Software
 - Support
 - Upgrade and Customization (Cost, Time, Risk)

Characteristics of World Class TOS

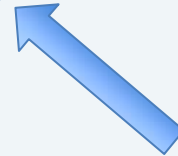
- *Flexible*
 - Configuration vs. Customization
 - Adaptable to changing business requirements
 - Able to meet diverse customer (and regulatory) needs
- *Open Architecture – Standards based*
 - Communications with outside world (EDI)
 - Standards-based Integration with external systems, i.e. PDS, OCR, Gate
 - Documented APIs
 - Open Data Access: Reporting, Dashboards, WWW

TOS Evolution

Customers
Partners

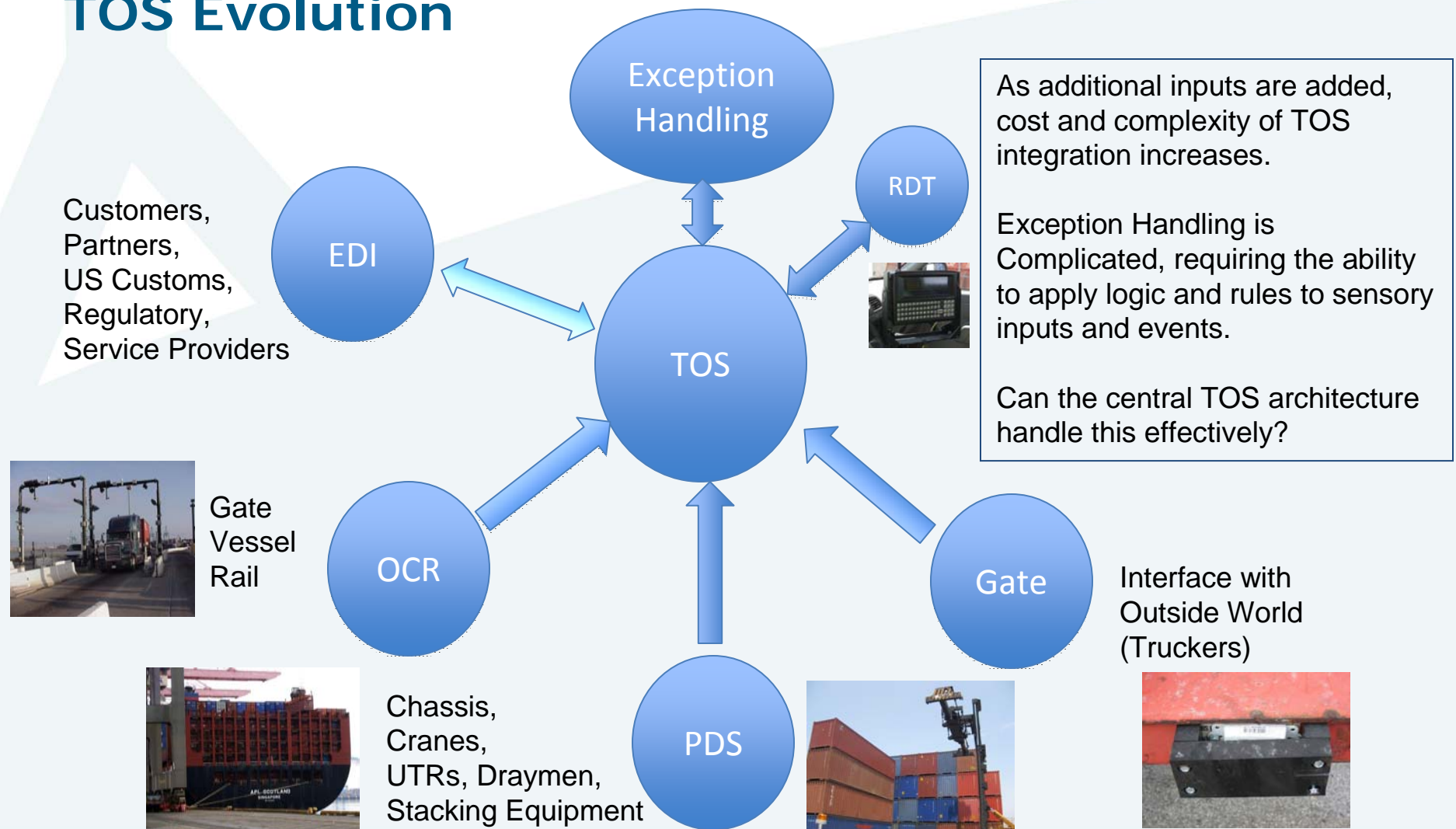


Work Instruction
Observe & Record
Exception Handling

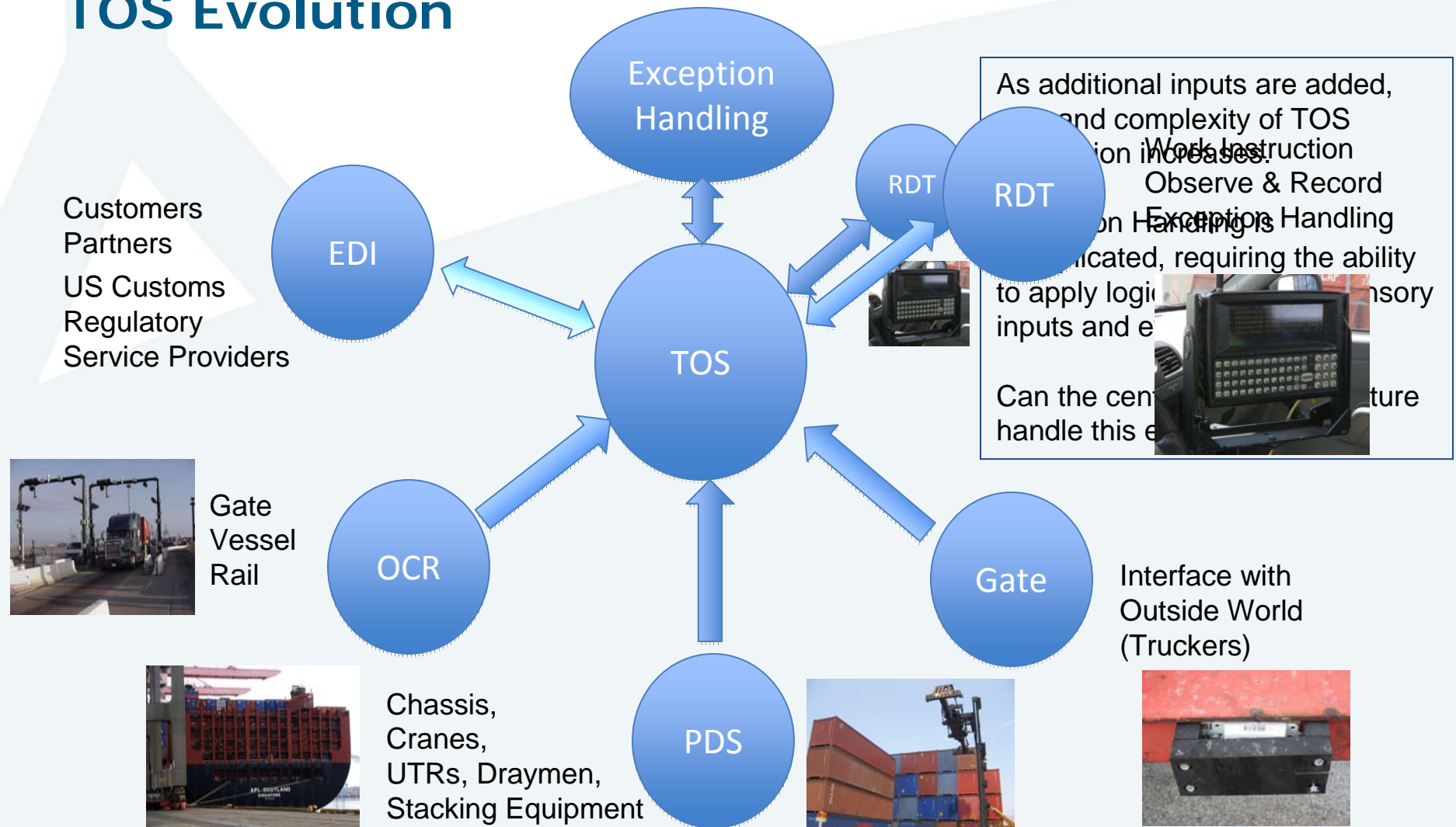


Interface with
Outside World
(Truckers)

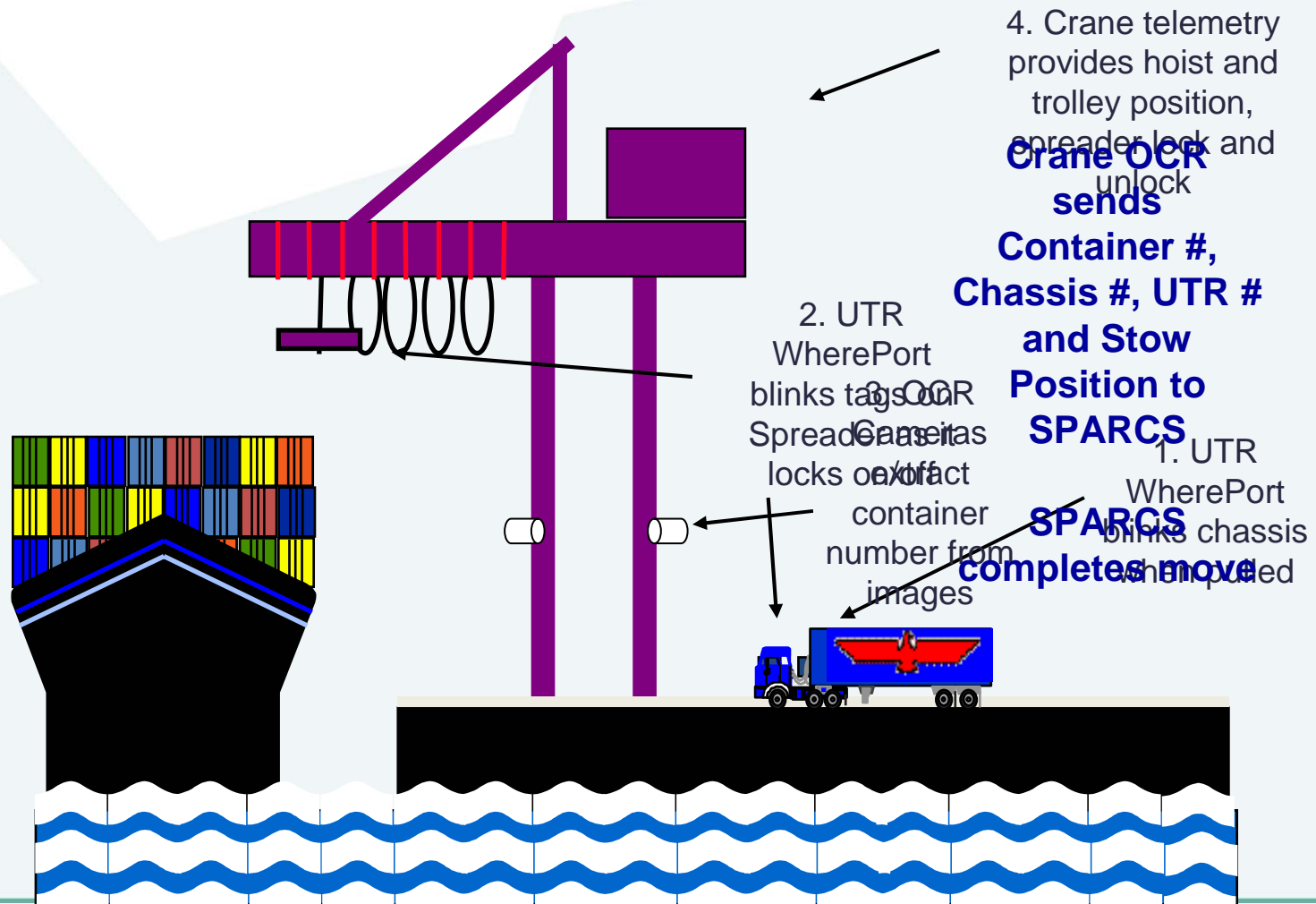
TOS Evolution



TOS Evolution



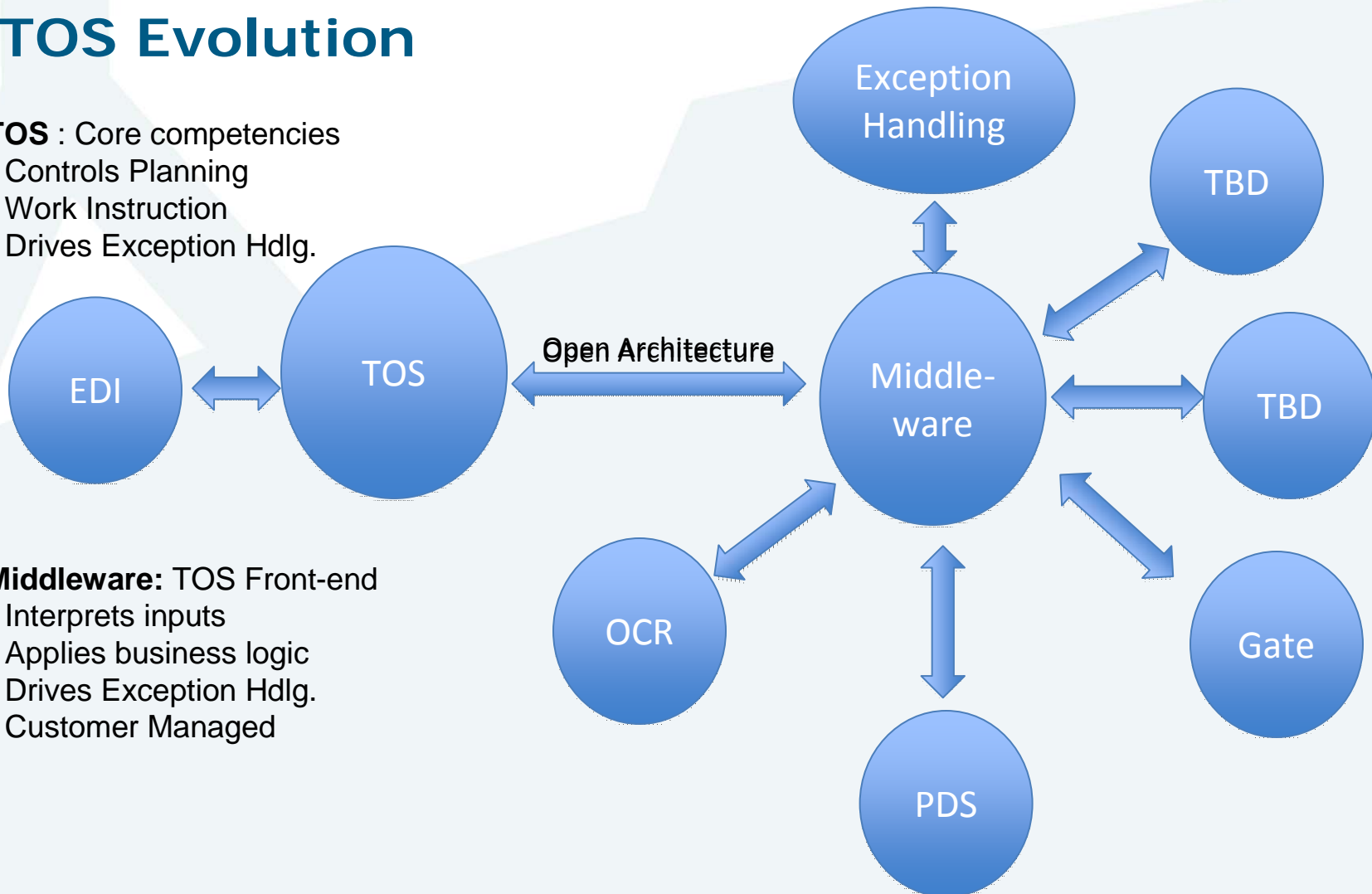
Crane OCR System in Action



TOS Evolution

TOS : Core competencies

- Controls Planning
- Work Instruction
- Drives Exception Hdlg.



Middleware: TOS Front-end

- Interprets inputs
- Applies business logic
- Drives Exception Hdlg.
- Customer Managed

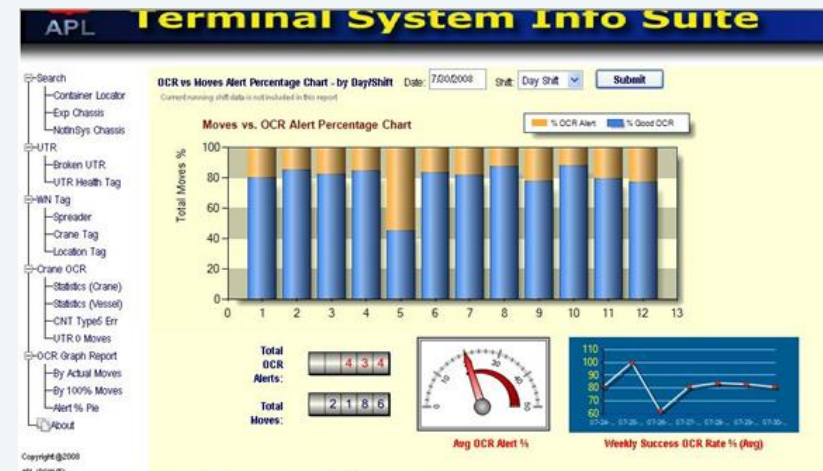
Planning & Implementation Lessons Learned

- *Product & Feature Evaluation*

- Operating Mode
- Volumes and Customer variety
- Customization vs. Configuration
- Balance Cutting vs. Bleeding Edge
- Vendor Commitment
- Long-Term Relationship

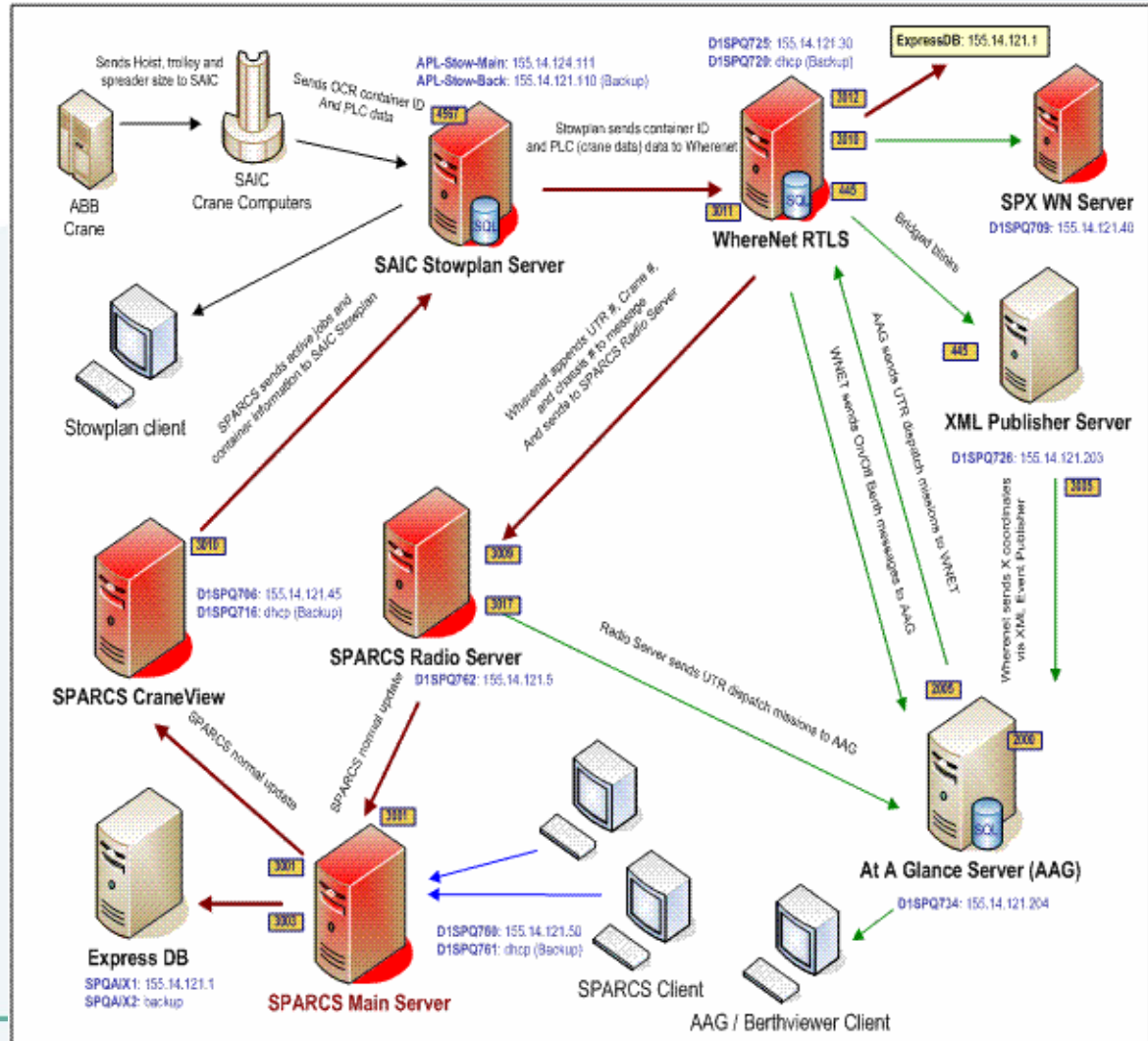
- *Organizational Commitment*

- Business Commitment
- Internal IT Commitment
- Central vs. Distributed model
- Long-Term Relationship



Importance of Your IT Staff

- *Whatever the Architecture, the TOS is complex*
- *Requires broad Technical Skills and Business Acumen*
- *IT as Technical Consultant*
- *IT as Protector*
- *Take Care of Them!*



Thank You