

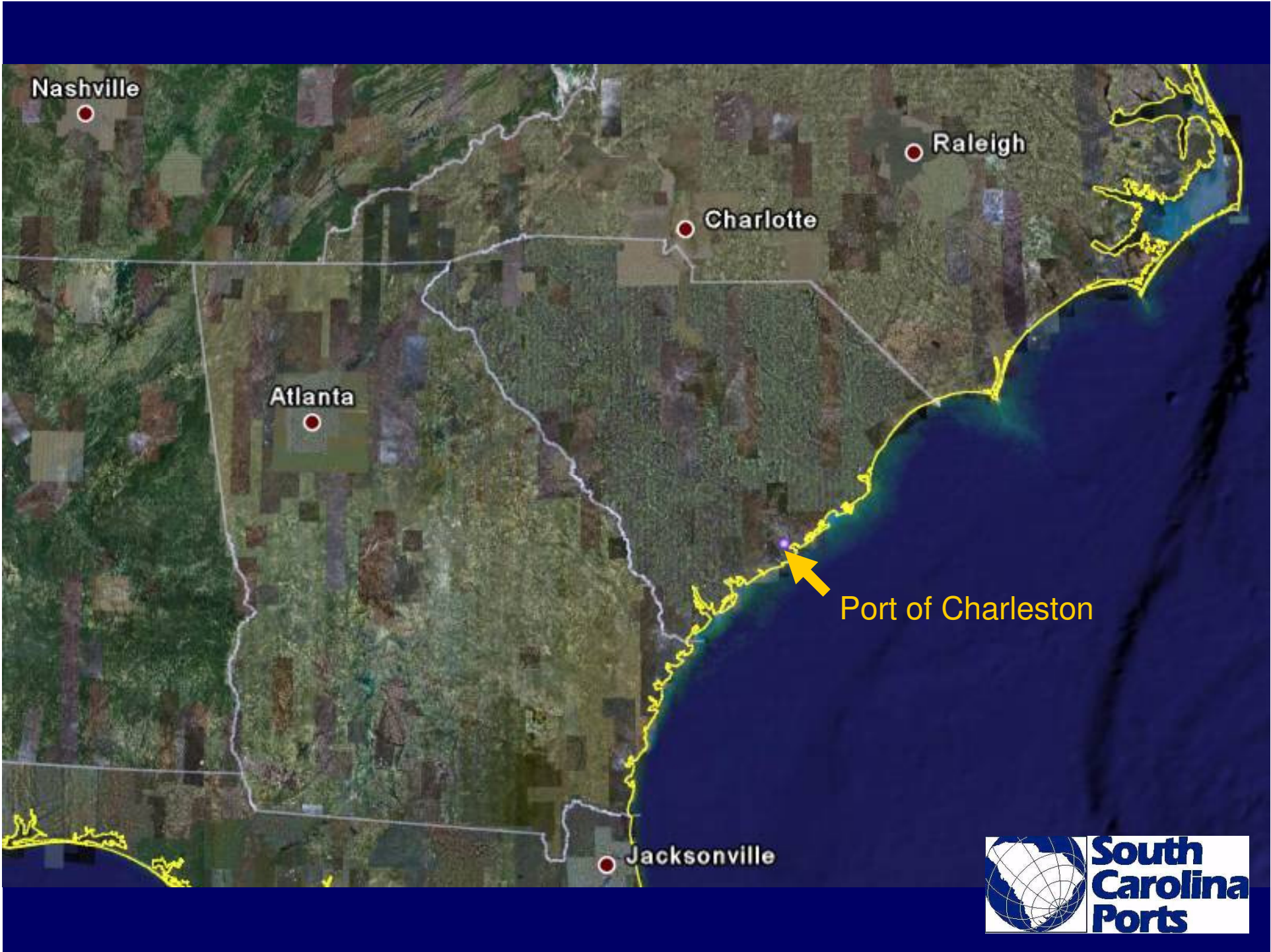
Faster Freight – Cleaner Air

A Summit on Goods Movement and Air Quality on the East Coast

Joe T. Bryant

South Carolina State Ports Authority





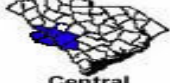





Port of Charleston

- **Six terminals in Charleston Harbor**
- **Operating port**
- **1.8 million TEU in 2007**
- **Structured like a private business**
- **Funded by earnings**
- **Earned world class productivity reputation**



South Carolina Air Quality

AQI	Good 0 - 50	Moderate 51 - 100	Unhealthy for Sensitive Groups 101 - 150	Unhealthy 151 - 200	Very Unhealthy 201 - 300
 Upstate	43				
 Central Midlands	47				
 Central Savannah	49				
 Pee Dee	39				
 Catawba	40				
 Trident	42				

SC Department of Health & Environmental Control, May 2008

Improving our Processes

- **Better management & use of outdoor lighting**
 - Directional, energy efficient lamps
 - Switching for minimum lighting situations
- **Minimize idling of Port equipment**
- **Capture of AC refrigerants**
- **Use (all on-port users) of LSDF (< 15 ppm)**

Improving our Processes

- **Yard Management System** (Port operates about 50% of all yard activities)
 - Handling instructions sent directly to yard equipment
 - Need for yard checker significantly minimized
 - Improves container yard safety
 - Reduced need for checker vehicle
- **Neutral Chassis Pool reduces handlings**



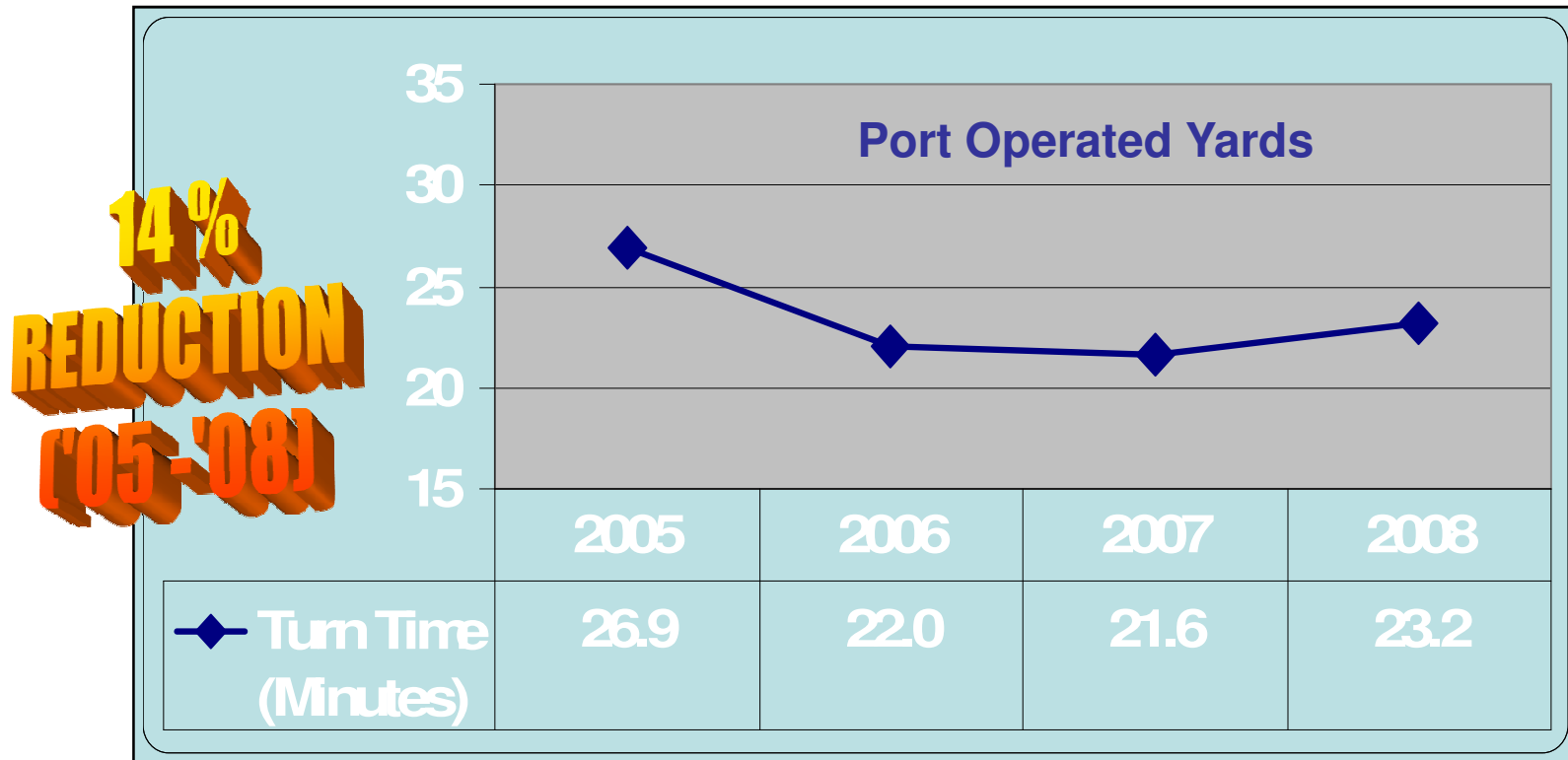
Improving our Capital Assets

- **Conversion to shore powered container cranes**
 - 20 year conversion with one crane remaining
 - Eliminates diesel gen-set operating cost
- **Routine replacement of RTG's, toplifters, ECH's, yard hustlers, etc.**
- **Shore powered reefer connections**
- **Upgrade of 21 RTG's from Tier 0 engines**

Improving our Capital Assets

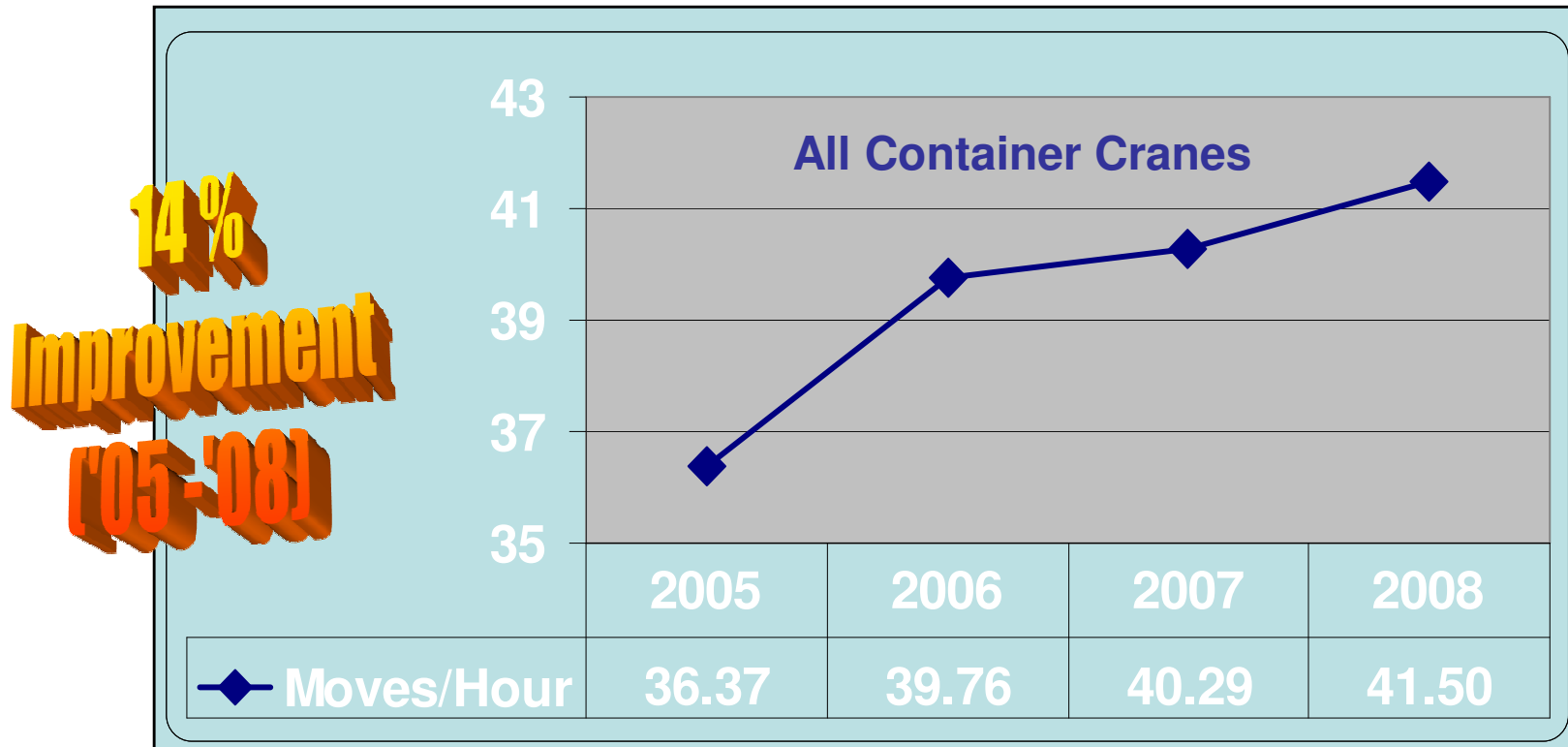
- **Consideration for Alternate Marine Power**
 - Many difficult issues to resolve
 - Does it just move the air quality impact
 - Are shore side systems the best answer
- **Consideration of particulate filters & diesel oxidation catalysts**
 - Would an engine upgrade be better
 - What operating and maintenance issues

Improving our Productivity



More cargo delivered per gallon of fuel

Improving our Productivity



More containers moved per hour of crane operation

We are Serious

- **Voluntary Air Emissions Inventory** (to benchmark our current operations)
- **Special Purpose Air Quality Monitor** (to measure & establish current conditions at the new site)
- **Efforts to involve Local Drivers and Fleet Operators** (to encourage others' participation)



A Clean, Efficient Operation

- Is Good Business
- Process Improvements reduce our costs
- Capital Improvements keep us efficient
- Good Productivity keeps us competitive
- All of the above contribute to

Faster Freight – Cleaner Air

