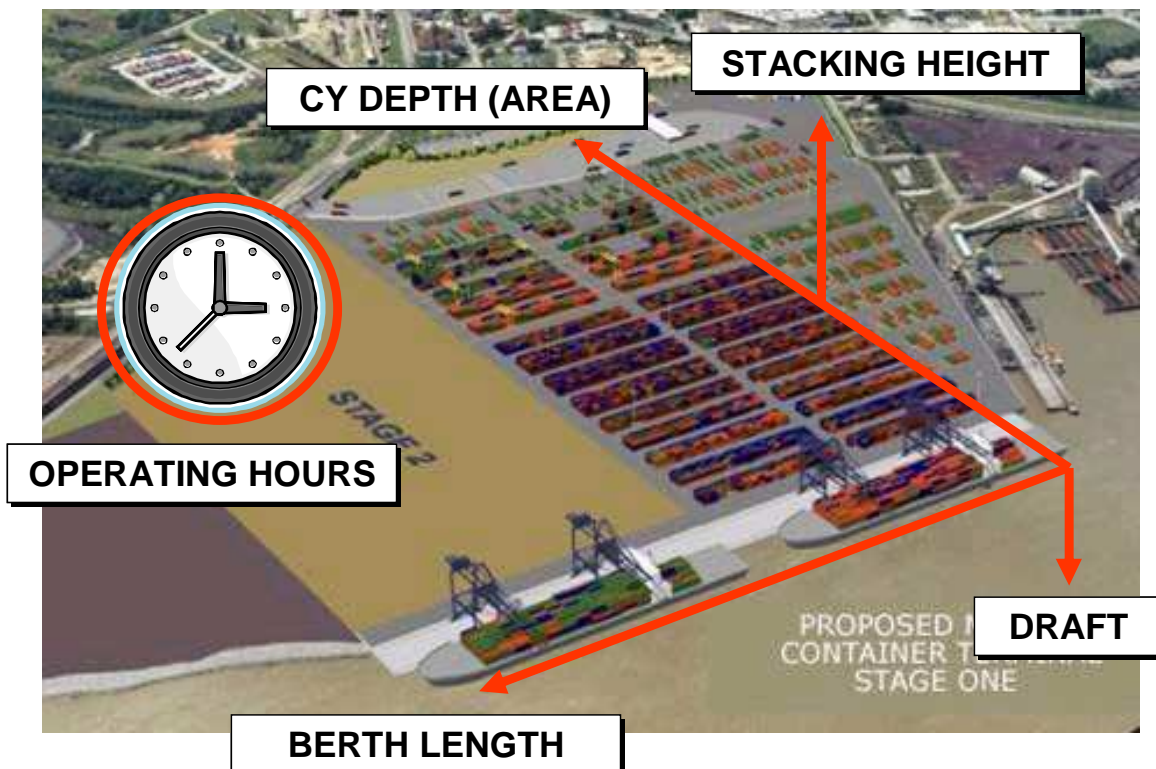


## IMPROVING MARINE CONTAINER TERMINAL PRODUCTIVITY (2010)

Tioga conducted a research project on behalf of the Cargo Handling Cooperative Program (CHCP) of the U.S. Maritime Administration (MARAD). The CHCP is a public-private partnership sponsored by MARAD whose primary mission is to increase cargo handling productivity through the implementation of focused research and development. Tioga's research addressed five key questions:

- What is the most useful set of marine terminal productivity metrics?
- Which productivity concepts are used by key stakeholders?
- What is the best way to collect and analyze the required data?
- What is the best approach to benchmarking?
- How can CHCP identify and encourage productivity improvements?

### Marine Terminal Productivity Dimensions



In completing this assignment Tioga cataloged the physical characteristics of large and small U.S. container ports. Tioga also documented port productivity using publicly available information for volume, size, equipment, and berth/vessel capabilities. A fundamental conclusion of the study is that, if benchmarking is to be meaningful, it must be done with multiple metrics. The differences between port operating characteristics can create misleading interpretations of productivity performance if only a single data element is used as the measure across all ports. No one measure, such as the very commonly used metric “lifts per acre”, will suffice.