# Information Age Framework for Design and Analysis

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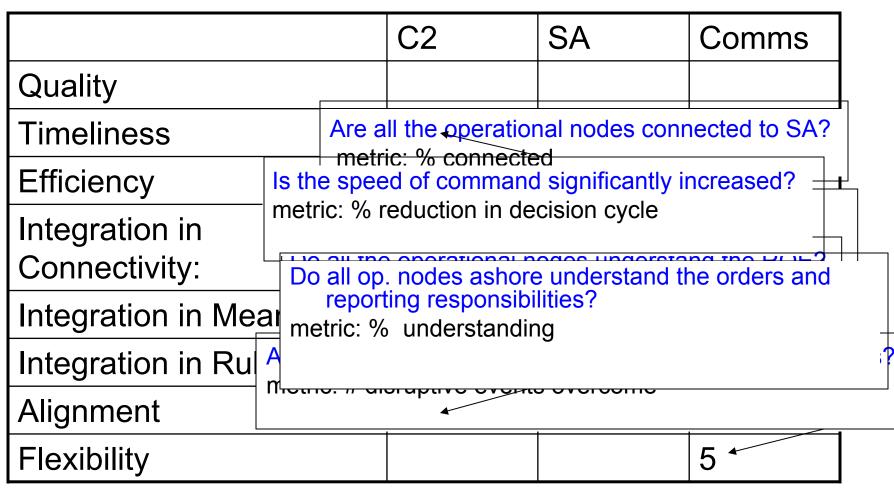
### The Framework

- The "Industrial Age" ROI Measures
  - Quality ("Better")
  - Timeliness ("Faster")
  - Efficiency ("Cheaper")
- The "Information Age" ROI Measures
  - Integration
    - Integration in Connectivity:
    - Integration in Meaning:
    - Integration in Rules:
  - Alignment
  - Flexibility

### Why to Use

- Provides a common frame or reference to design or evaluate solutions that solve Critical Operational Issue(s).
- Example:
  - Possible IMPP COI
    - Can the IMPP leave-behind system significantly improve the Public Security response to a coordinated ashore and afloat terrorist attack?

# Develop MOEs to Evaluate whether COI is satisfied



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## Summary: Example MOE

- 1. Are all the operational nodes connected to SA? (metric: % connected
- 2. Do all the operational nodes understand the SA? (metric: % understanding)
- 3. Do all the operational nodes understand the ROE? (metric: % ROE understood)
- 4. Do all op. nodes share the commander's intent? (metric: % intent understood)
- 5. Are the communications able to adjust to likely disruptions? (metric: # disruptive events overcome)
- 6. Is the speed of command significantly increased? (metric: % reduction in decision cycle)
- 7. Do all op. nodes ashore understand the orders and reporting responsibilities? (metric: % understanding)

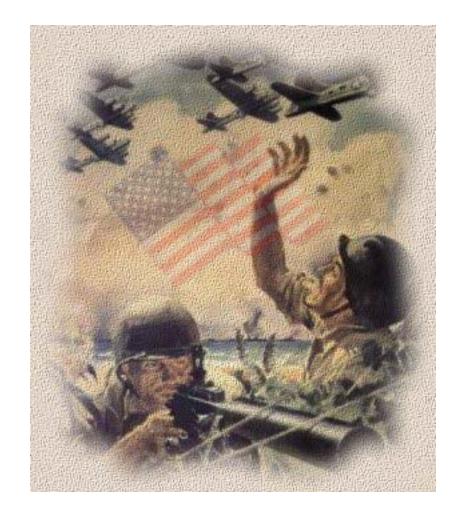
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#### Framework Use

- For high-level decision makers use a COI stoplight presentation for go/no-go decision
- For acquisition professionals use Industrial age measures to demonstrate cost avoidance ROI and Information Age measures to demonstrate transformational capabilities
- For component vendors use questions specific to their business area (C2, Comms, SA) to configure appropriate solutions
- For system integrators use questions to motivate user-centered vs. self-referential solutions

Thank you



### The Framework - Details

- The "Industrial Age" ROI Measures
  - Quality ("Better")
    - High quality products display an absence of defects
  - Timeliness ("Faster")
    - The time required to execute a step in a plan.
  - Efficiency ("Cheaper")
    - The ratio of output over input
- The "Information Age" ROI Measures
  - Integration
    - Integration in Connectivity:
      - The ability to exchange symbols between nodes (syntax).
    - Integration in Meaning:
      - When symbols are exchanged they convey the same content (semantics).
    - Integration in Rules:
      - When receiving the same content, under the same conditions, all participants will take the same action (cognitive processes).
  - Alignment
    - An aligned organization reflects the owner's intent ("unity of purpose").
  - Flexibility
    - Flexibility is the ability of the enterprise to change with a minimum of disruption in terms of cost, schedule, or function.