



## Work Team Design for Remote Operations

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# Work Team Design

- Ensuring you :
  - Have the right number of competent resources
  - Deploy them appropriately to execute assigned team tasks
  - Provide them with the appropriate tools to perform the tasks
  - Support them with effective supervision and necessary support functions
  - Effectively operate under all operating conditions
  - Manage the culture change

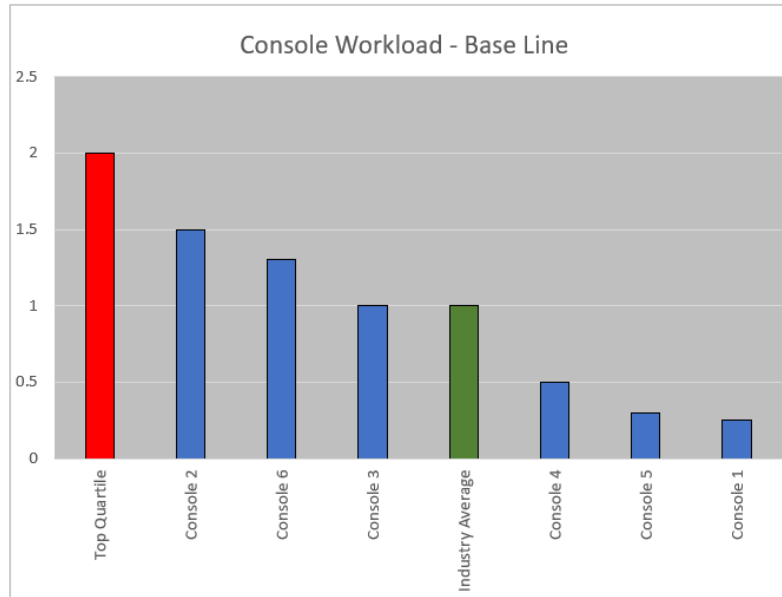
# Mode of Operation

- Determine mode of operation:
  - Monitor
  - Monitor and Advise
  - Monitor and Control
- Then determine who is doing what?
  - Assign tasks to PCS or Human
  - Perform task analysis

Evolution and Maturity



# Right Number of Competent Resources



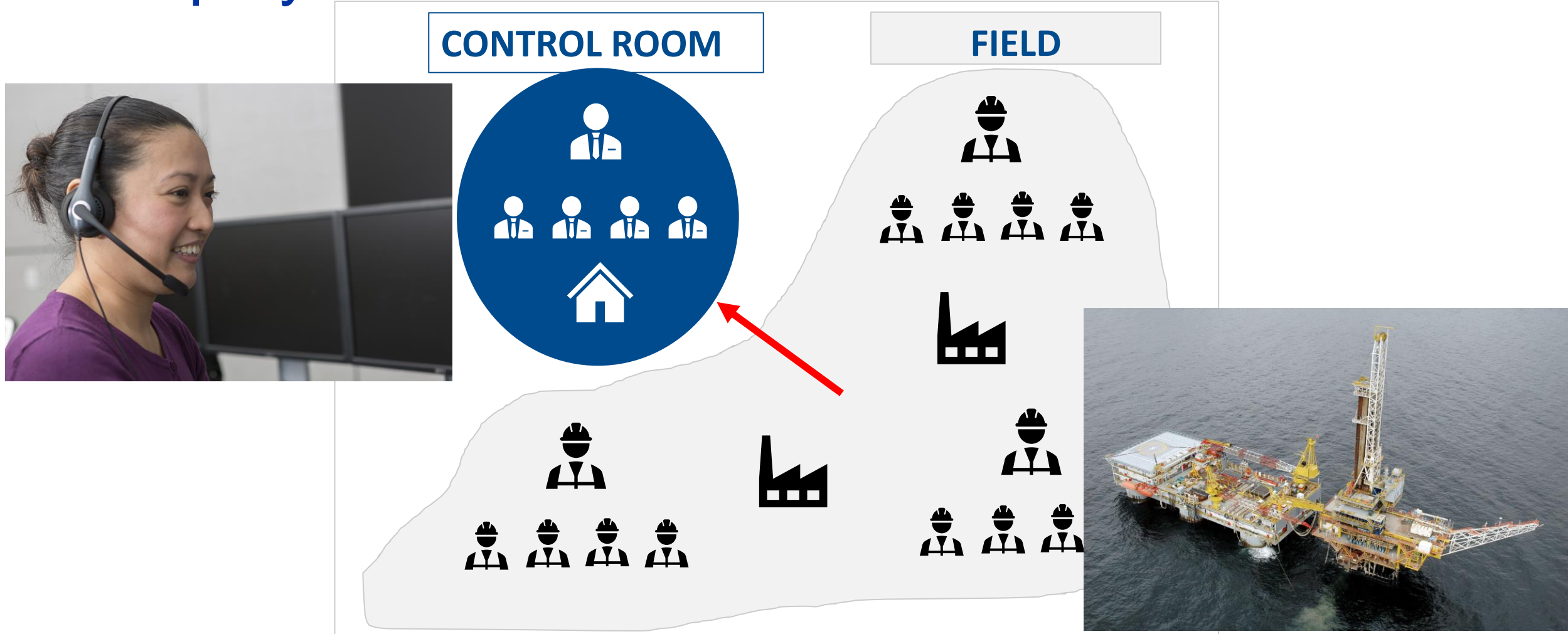
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Operator Workload  
Fatigue Risk Management  
(ANSI/API RP-755)

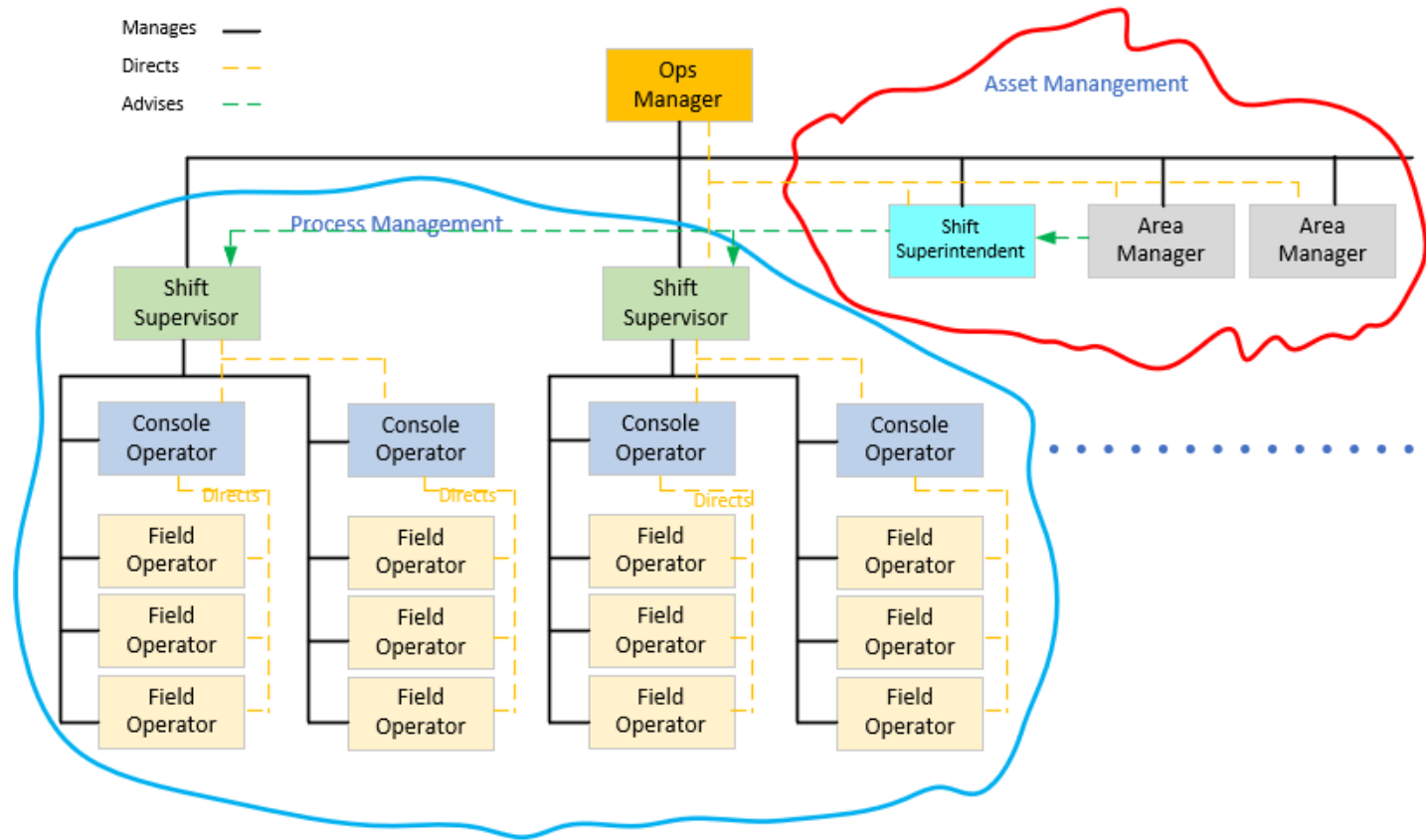
Selection  
Training – OJT?  
Certification

# Deployment



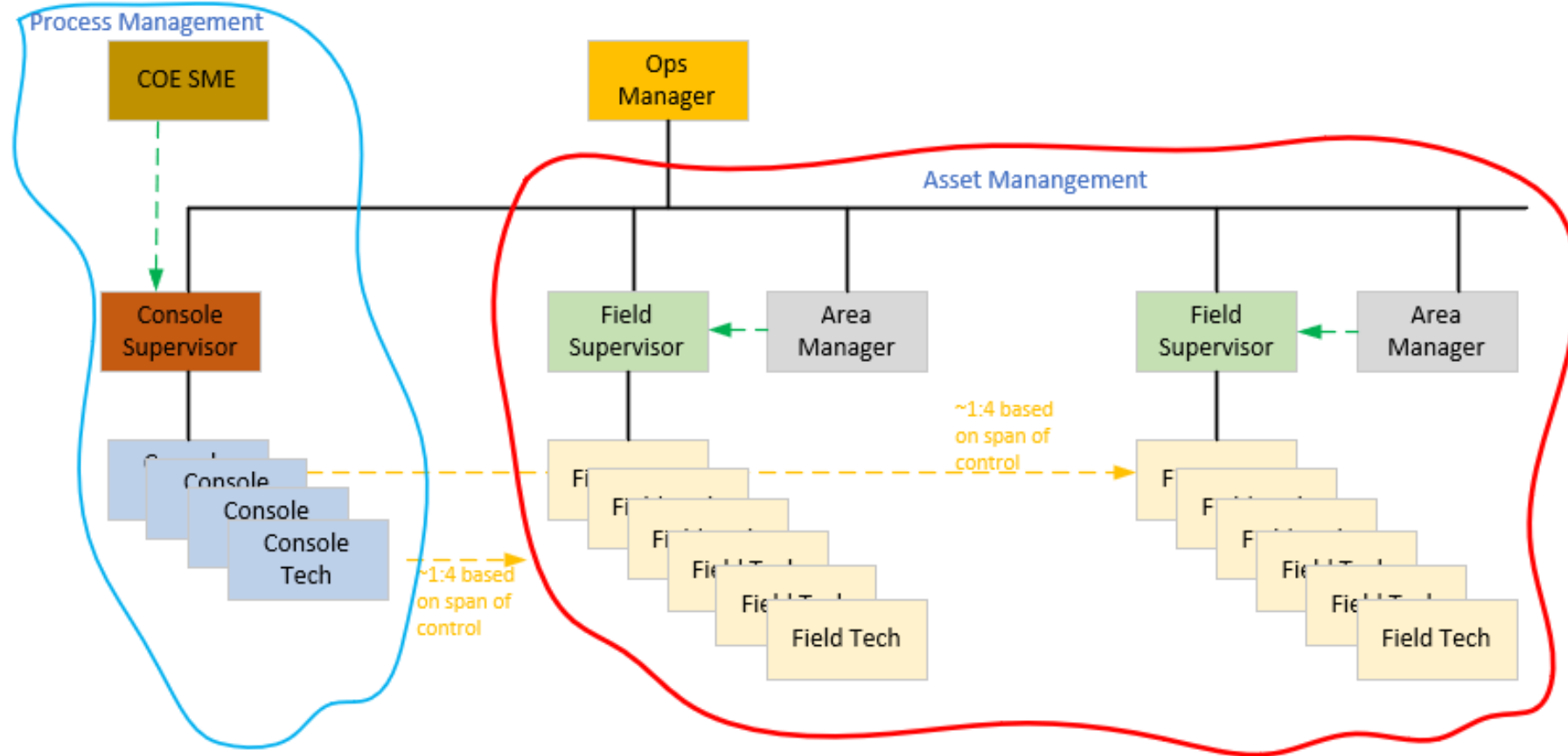
# Deployment

'Traditional' Reporting Structure  
(Area Centric)



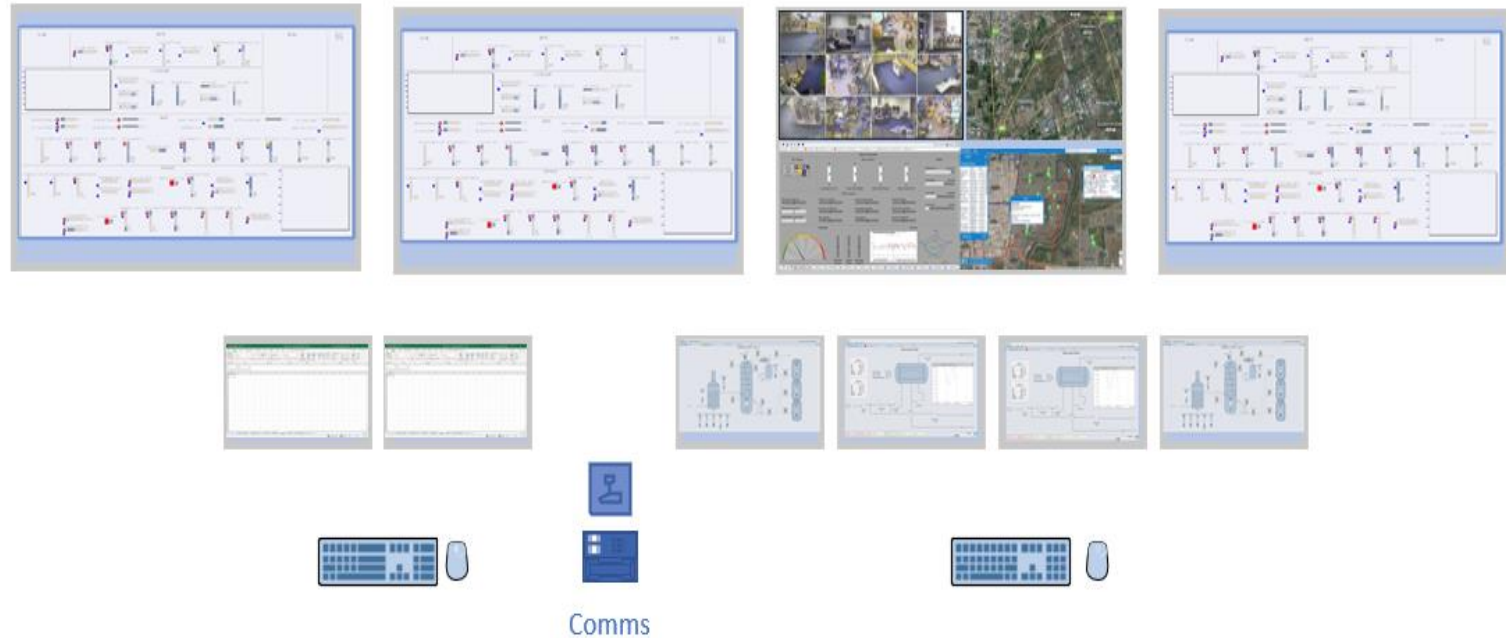
# Deployment

## 'New' Reporting Structure (Function Centric)



# Tools - PCS

- Data Integration at the console
  - Operations
  - Reliability
  - Process Safety
  - Security
- Cybersecurity
- Hardwired equipment
- Backup Facilities
- Alarm Management





# Tools - Communications

- Communications
  - Robust
  - Back up systems
  - Time/Date
  - Language
- Radio
- Phone
- Cell phone
- SMS
- Collaborative environments (Smart boards, Teams, Webex...)
- Wearable technology



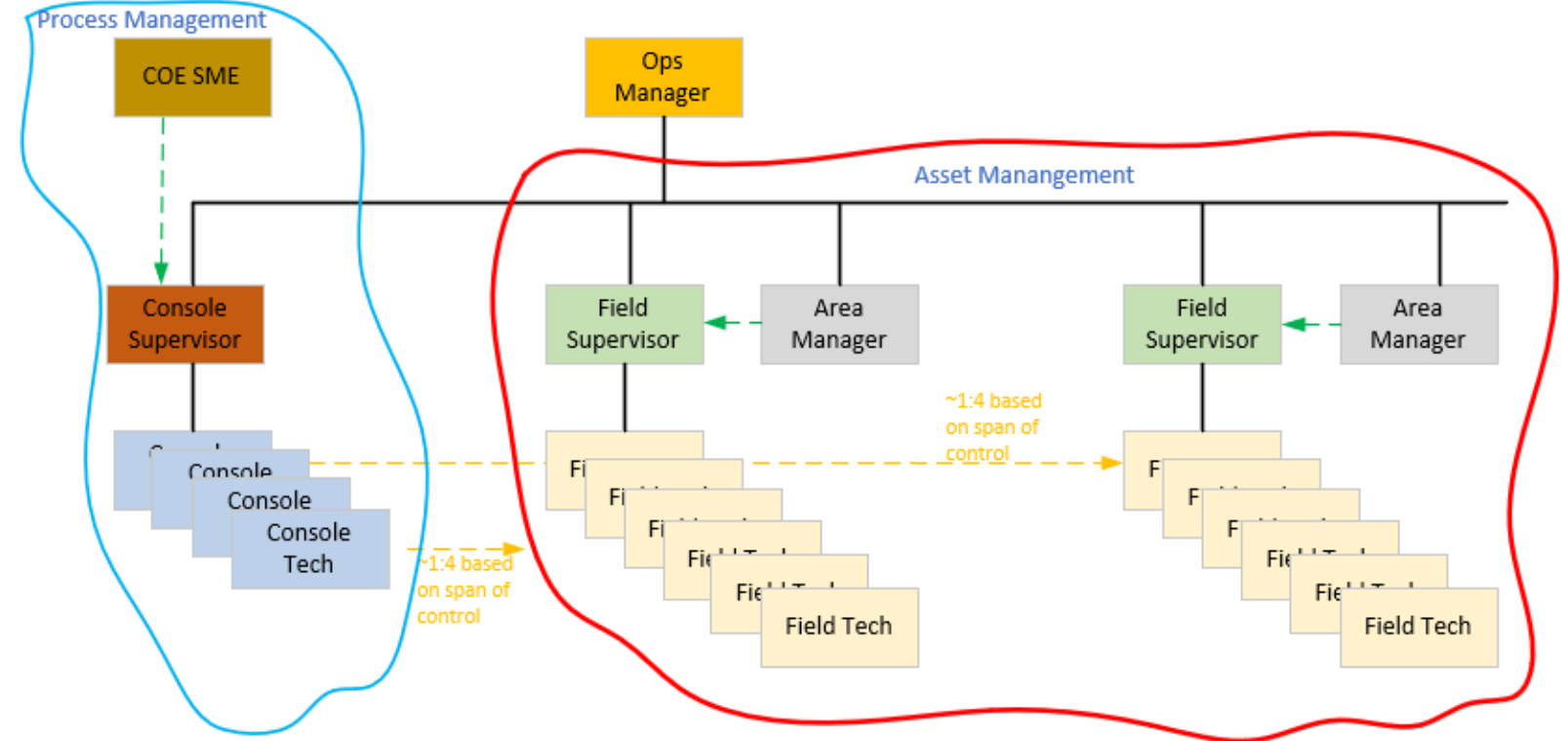
<https://www.microsoft.com/en-us/surface/business/surface-hub-2>

# Supervision

(UK HSE RR 292)

- Self-Directed Teams
- Area Supervisor
- Console Supervisor
- Field Supervisor

'New' Reporting Structure  
(Function Centric)



# Operating Modes

- Normal
- Commissioning
- Start Up / Shutdown
- Abnormal
  - Loss of local power
  - Loss of communications (network)
  - Loss of communications (verbal)
  - Emergency

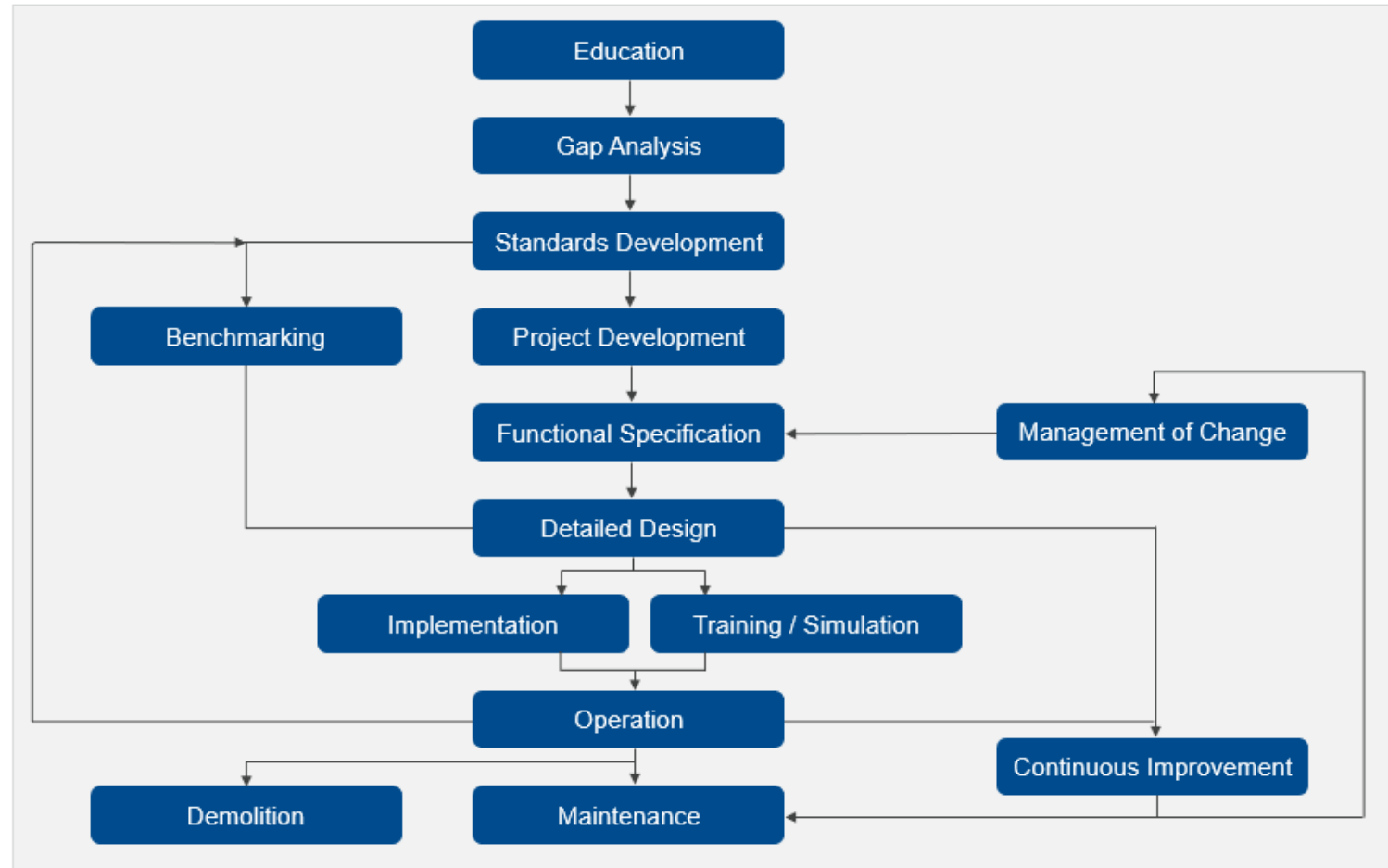


# Culture Change

- Splitting of Team
- Them vs Us
- Engagement!
- Management of (Organizational) Change

*(UK HSE CRR348)*

Entry Point vs Increasing Project Risk



Managing Culture Change

# Conclusion

- Work Team Design must ...
  - be a thoughtful process
  - consider all modes of operation
  - be future proof
  
- The deployment of technology is a solution and not the goal!

# Questions?

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