**Technical / Ops Procedures – Manual Ops SOP**

**Purpose:**  
To provide procedures for maintaining critical terminal operations when automated systems (planning tools, sensors, scheduler) are unavailable or untrusted. This ensures operational continuity under degraded conditions.

**When to Use**

• AIS, GPS, or scheduling systems are offline or compromised  
• Physical equipment must be operated manually due to override or comms failure  
• Planning dashboards are inaccessible or unreliable  
• Crane, berth, or container tasks require local coordination

**Step 1: Confirm Degraded State**

• Alert received or dashboard offline  
• Confirm affected subsystems: AIS Aggregator, Container Scheduler, Crane Feed  
• Log timestamp of service interruption and notify Coordinator

**Step 2: Fallback Coordination Protocol**

• Switch to physical or phone-based coordination with key terminal staff  
• Assign a Manual Ops Lead for each shift (usually Dockside Supervisor)  
• Use printed manifests or radio comms to:

* Confirm container ID and destination
* Track crane activity
* Coordinate berth sequence and clearances

**Step 3: Manual Planning Flow**

• Maintain whiteboard or paper-based record of:

* Ship arrivals and departures
* Crane assignments and lift cycles
* Container stack movements  
  • Record decisions with time, operator name, and authorisation source  
  • Confirm every manual task with second party when safety-critical (e.g. container override)

**Step 4: Ops Log & Incident Tagging**

• All manual tasks to be entered into /incident/manual-ops-log.txt  
• Use structured format:

[Timestamp] [Operator] [Action Taken] [System Bypassed] [Confirmation Source]

• Flag any incidents involving:

* Missed clearances
* Wrong container movement
* Physical override of safety interlocks

**Step 5: Restore & Reconciliation**

• When system restored:

* Validate manual records against recovered system state
* Update container locations or berth schedules manually in planning tool
* Note discrepancies in Ops After-Action Log  
  • Identify if any incorrect assumptions occurred due to loss of visibility

**Owner:** Ops Lead  
**Reference:** TECH-08  
**Version:** 1.0  
**Approved by:** Cyber-Ops Coordination Cell