This A3 based on the work of SEMA participants: Martin Moberg, Tormod Strand, Vazgen Karlsen, and Damien Wee, and the master project paper by Dag Jostein Klever, Aker Solutions, FMC Technologies.

**Workover operation; architecture overview**

**Workover workflow**
1. Assembly, functional test
2. Run EDP/LRP
3. Run risers
4. Hook up coil tubing and wireline BOP
5. System function and connection seal test
6. Run coil tubing and wireline
7. Perform workover operations
8. Retrieve coil tubing and wireline BOP
9. Unhook coil tubing and wireline BOP
10. ROV assisted disassembly
11. Retrieve SFT and TF
12. Retrieve risers

**Disruption workflow**
1. Retract wireline
2. Shut down valves
3. Control top & well
4. Disconnect EDP
5. Move away
6. Wait
7a. Move above well
7b. Reconnect EDP
7c. Control top & well
8. Open valves
9. Run wireline

**Disruption timeline**
- Workover disruption: Move away
- Wait for disruption
- Move above well
- Reconnect EDP
- Control top & well
- Open valves
- Run wireline

**Disruption operations**
- Shut down valves
- Control top & well
- Connect lifeboat
- Disconnect EDP
- Operate ROV
- Move above well
- Reconnect EDP
- Open valves
- Unhook coil tubing and wireline BOP
- Run wireline

**Physical model**
- Tension frame connects riser to rig tension system
- Wireline BOP provides well control
- Workover control system
- Monitoring and control of subsea installation
- Rig structure and pressure-containing interface

**Workover cost estimate**
- **Actual workover operation**
  - Running and retrieving risers: 50m/hr
  - Running and retrieving coil tubing/wireline: 100m/hr
  - Depth: 300m

- **Estimated duration** (hrs): 48
- **Deferred operation** (hrs): 62
- **Resume production** (hrs): 27
- **Total** (hrs): 135 (5.6 days)

- **Deferred operation per day**
  - Production loss: 0.1
  - Ongoing cost: 0.1
  - Total deferred cost: 0.3

- **Workover cost per day**
  - Assumed cost: 2.0 MNoK
  - Total cost: 2.3 MNoK/day

- **Cost equation**
  \[ \text{cost} = \text{cost}_{\text{workover/day}} \times t_{\text{workover}} + \text{cost}_{\text{deferred op/day}} \times t_{\text{deferred op}} \]
  \[ \approx 2.3 \times 5.6 + 0.3 \times 2.6 \approx 14 \text{ MNoK/workover} \]