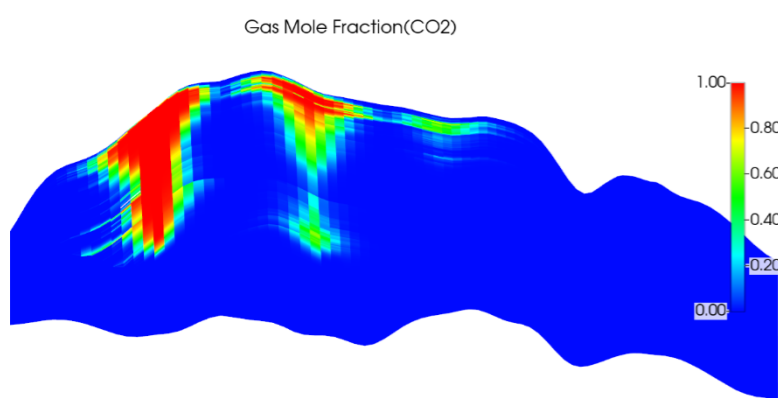
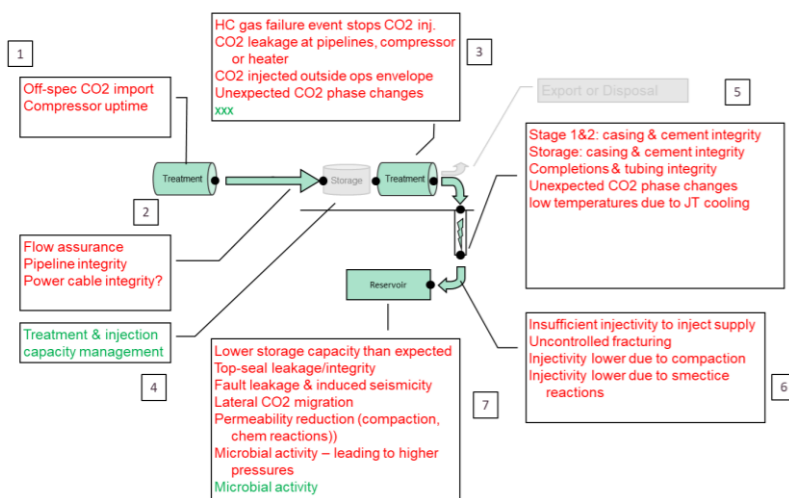


RISK MANAGEMENT AND MONITORING FOR CCS PROJECTS

By Marcel Zwaan, Thomas Mooij, Urszula Meissner, Iasmina Popa, Peter van den Bogert, PanTerra Geoconsultants. Abstract number 144



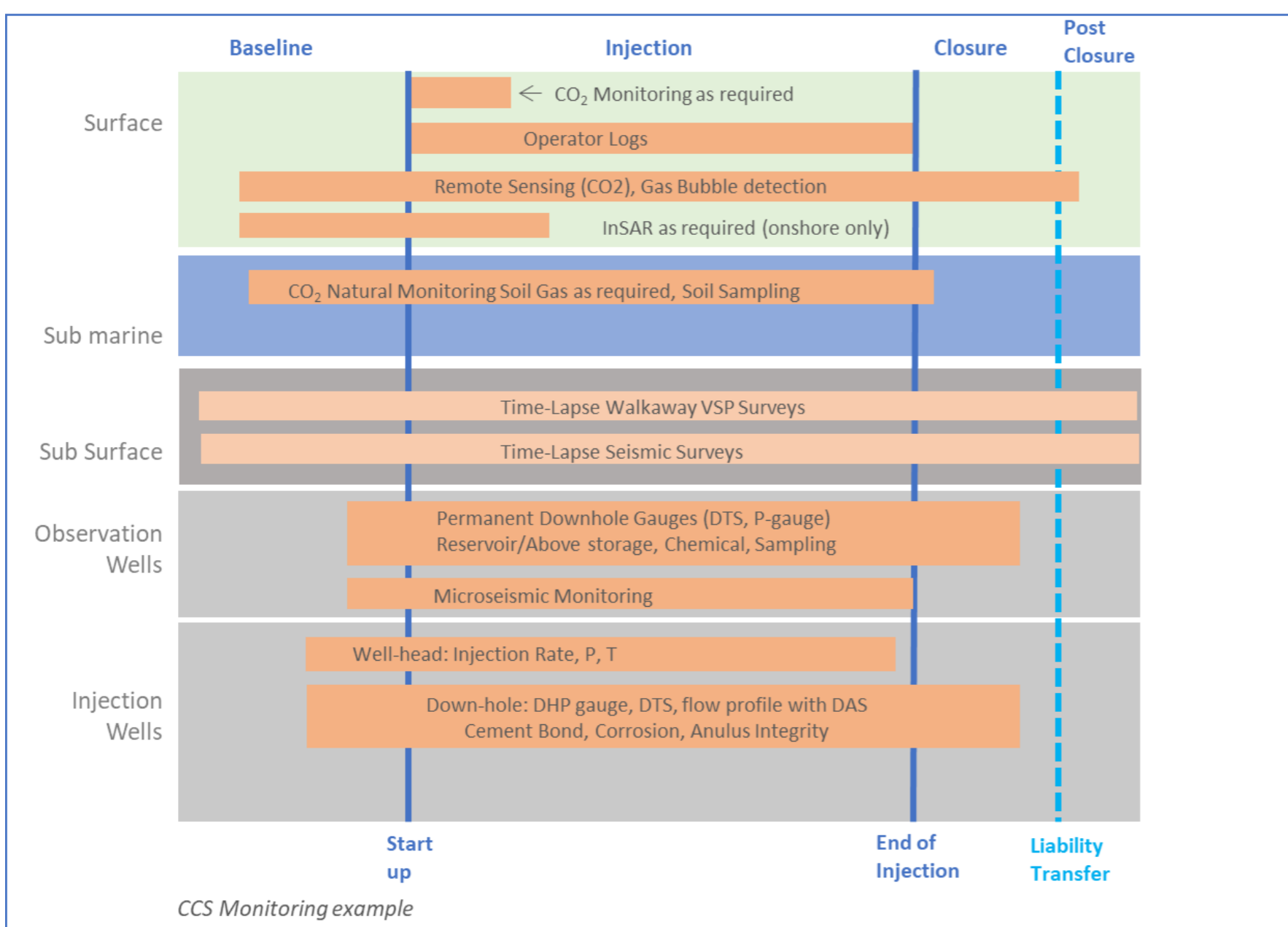
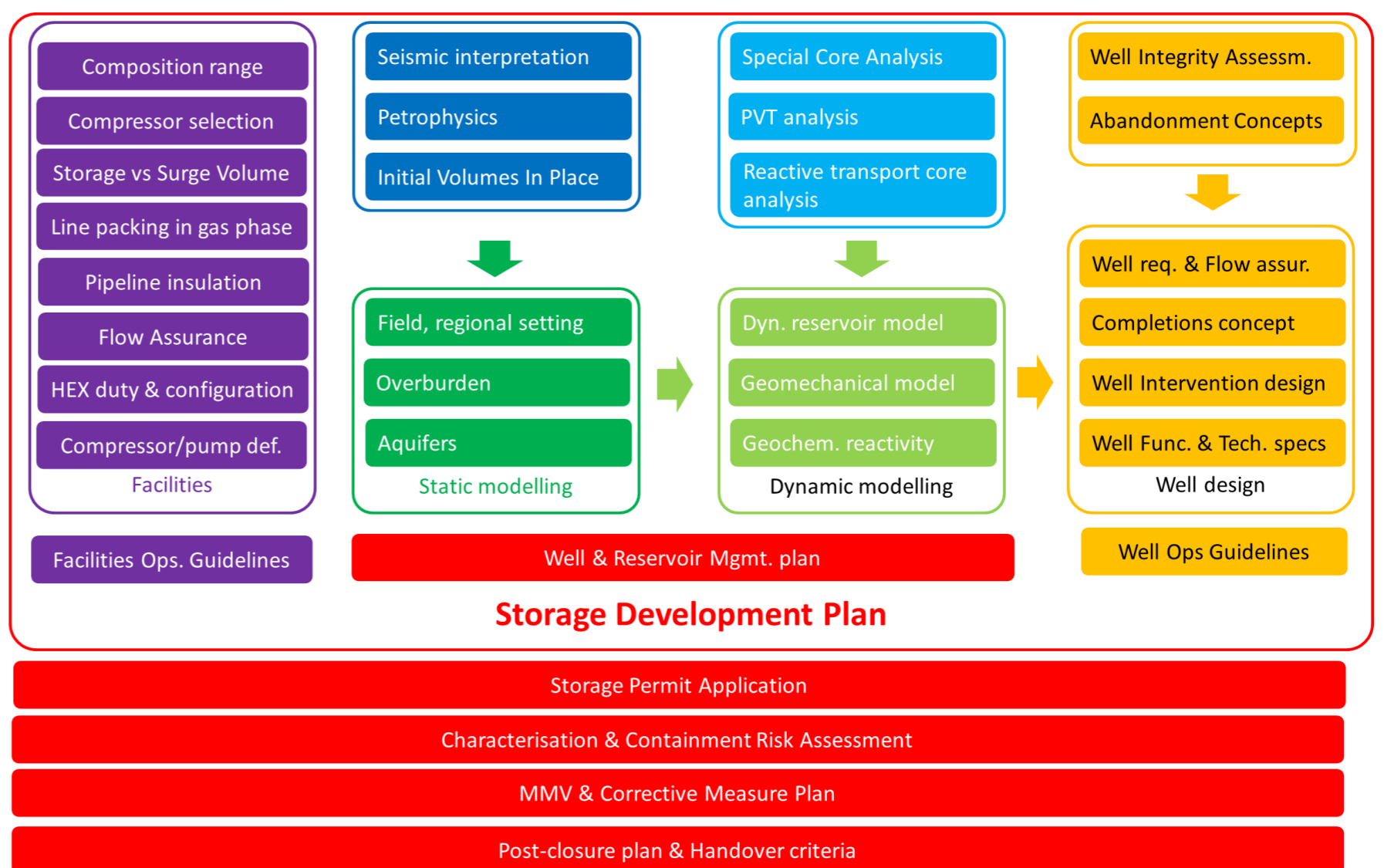
Risks & Opportunities



Method and Theory

Risk assessment According to the EU Directives

- Capacity – “Can we store it?”
- Injectivity – “Can we inject it?”
- Integrity – “Can we contain it?”
- Monitorability - “Can we monitor it?” (MMV)



Caprock Integrity Assessment

Geological Description

- Lateral continuity
- Faulting (sealing/leaking)
- Core analysis
- Rock Composition (XRD, SEM, Petrography)

Geochemical Description

- Chemical reaction modelling + Reaction Tests
- Capillary Entry Pressures

Dynamic Description

- P, T and Phase behaviour
- P, T propagation through reservoir

Geomechanical Description

- Caprock Strength + Stress state
- Critical P and T → MOP